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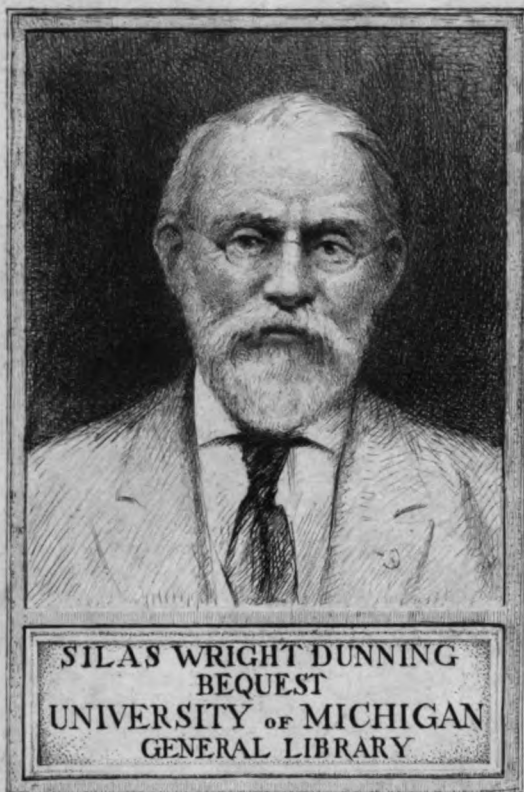
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# *Journal*

OF THE

## *United Service Institution of India.*

Published under the Authority of the Council.



SIMLA:

UNITED SERVICE INSTITUTION OF INDIA.

Published Quarterly.

Price Rupees 2-8.

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# United Service Institution of India.

## RULES OF MEMBERSHIP.

**A**LL officers of the Royal Navy, Army, Royal Air Force, Colonial Forces, and of the Indian Defence Force, and Gazetted Government Officers shall be entitled to become members without ballot, on payment of the entrance fee and annual subscription.

The Council shall have the power of admitting as honorary members the members of the Diplomatic Corps, foreign naval and military officers, foreigners of distinction, other eminent individuals, and benefactors to the Institution, not otherwise eligible to become members.

Life Members of the Institution shall be admitted on the following terms:—  
Rupees 75 + entrance fee (Rs. 10) = Rs. 85.

Ordinary members of the Institution shall be admitted on payment of an entrance fee of Rs. 10 on joining, and an annual subscription of Rs. 10, to be paid in advance. The period of subscription commences on 1st January.

Subscribing members of the Royal United Service Institution, Whitehall, London, are not liable for entrance fee while the affiliation rules are in force.

Life members receive the Journal of the Institution post free anywhere, but ordinary members only in India. All members may obtain books from the library on paying V. P. postage.

Honorary Members shall be entitled to attend the lectures and debates, and to use the premises and library of the Institution without payment; but should they desire to be supplied with the Journal, an annual payment of Rs. 10, in advance, will be required.

Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Serjeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 8.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution on or after the 1st October, will not be charged subscription on the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not been returned by the post.

Members or Subscribers to the Journal, intimating a wish to have their Journals posted to any address out of India, shall pay in advance Rupee 1 per annum, to cover foreign postage charges, but Life Members who have left India shall not be liable for foreign postage on Journals.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

### Contributions to the Journal.

All papers must be written in a clear, legible hand, and only on one side of the paper. All proper names, countries, towns, rivers, etc., must, when in manuscript, be written in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., Vol. II., para. 487, and King's Regulations, para. 453.

Anonymous contributions under a *nom-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer, and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *nom-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted, in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published.

Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.

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## **United Service Institution of India.**

### **PATRON.**

His Excellency the Viceroy and Governor-General of India.

### **VICE-PATRONS.**

His Excellency the Governor of Madras.  
His Excellency the Governor of Bombay.  
His Excellency the Governor of Bengal.  
His Excellency the Commander-in-Chief in India.  
His Honour the Lieut. Governor of the U. P. of Agra and Oudh.  
His Honour the Lieut. Governor of the Punjab.  
His Honour the Lieut. Governor of Burma.  
His Honour the Lieut. Governor of Bihar and Orissa.  
His Excellency the Naval Commander-in-Chief, East Indies.  
The General Officer Commanding, Northern Command.  
The General Officer Commanding, Southern Command.

### **MEMBERS OF THE COUNCIL, 1920-21.**

#### *Ex-officio Members*

- |   |   |
|---|---|
| 1. The Chief of the General Staff.                | 7. The Director General Indian Medical Services.    |
| 2. The Secretary, Army Department.                | 8. The Director Royal Indian Marine.                |
| 3. The Hon'ble Mr. H. R. C. Dobbs, C.S.I., C.I.E. | 9. The Director Military Operations.—General Staff. |
| 4. The Adjutant General in India.                 | 10. The Air Commodore, R. A. F.                     |
| 5. The Quartermaster General in India.            | 11. R. D. Craik Esq., I.C.S.                        |
| 6. The Director Medical Services.                 |   |

#### *Elected Members.*

- |   |  |
|---|--|
| 1. Major-Genl. H. F. Cooke, C.B., D.S.O.    | *6. Lt.-Col. G. M. Molloy, O.B.E.      |
| *2. Maj.-Genl. Sir J. Moore, K.C.M.G., C.B. | *7. Lt.-Col. H. R. Nevill, O.B.E.      |
| *3. Brig.-Genl. H. R. Stockley, C.I.E.      | *8. Lt.-Col. A. C. Ogg, D.S.O., O.B.E. |
| *4. Col. A. F. Cumberlege, O.B.E., R.E.     | 9. Dr. G. T. D. Walker, C.S.I.         |
| *5. Lt.-Col. R. de Burgh, D.S.O.            |  |

\*Members of the Executive Committee and in addition.

Major-Genl. J. C. Rimington, C.B., C.S.I.  
Major M. T. Cramer Roberts, D.S.O.

Major R. B. Deeds, M.C.  
Major A. V. Gompertz, M.C.

SECRETARY & EDITOR  
SUPERINTENDENT  
BANKERS

..LIEUT. COL. W. L. J. CARRY, R.A.  
..S. CR. R. SANDERSON, I.O.D.  
..ALLIANCE BANK OF SIMLA, LTD.

1. The United Service Institution of India is situated at Simla.
2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed on the opposite page.
3. The reading-room of the Institution is provided with all the leading newspapers, magazines, and journals of military interest that are published.
4. There is a well-stocked library in the Institution, from which members can obtain books on loan, free. Suggestions for new books are solicited, and will be submitted to the Committee. Books are sent out to members V. P. for the postage, or bearing by railway.
5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in India and to all life members; but ordinary members wishing to have their journals sent to any address out of India must pay in advance Re. 1 per annum to cover foreign postage charges.
6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found on the opposite page.
7. MEMBERS ARE RESPONSIBLE THAT THEY KEEP THE SECRETARY CAREFULLY POSTED WITH REGARD TO CHANGES OF ADDRESS.
8. When on leave in England, members can, under the affiliation rules in force, attend the lectures and make use of the reading-room, etc., of the Royal United Service Institution, Whitehall, on payment of a subscription of 5 shillings per six months.

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## United Service Institution of India.

JANUARY 1921.

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## **SECRETARY'S NOTES.**

### **I.—New Members.**

The following members joined the Institution between the 1st October 1920 and the 30th November 1920.

### **LIFE MEMBERS**

Capt. D. Chesney.

Capt. E. Hobson.

Major. H. F. Campbell.

### **ORDINARY MEMBERS.**

Capt. L. E. Dennys.

Capt. R. F. Loudoun.

„ W. S. Pender.

Lt. C. N. Oxenford.

„ W. H. Stevenson.

Capt. J. K. B. Campbell.

„ R. B. Watts.

### **II.—Examinations.**

Books on Military History and Languages with Dictionaries are available in the Library and the following books which may be found useful for reference by officers, studying for promotion examinations or entrance to the Staff College have been placed in the Library of the U. S. I. and are available for use by members.

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### **IMPERIAL MILITARY GEOGRAPHY.**

Imperial Defence. By Lt.-Colonel E. S. May.

Outlines of Military Geography. By MacDonnell.

Imperial Strategy. By Lt.-Colonel Repington.

Military Geography. By Macquire.

Introduction to Military Geography. By General E. S. May.

War and the Empire. By Hubert Foster.

## **Secretary's Notes.**

### MILITARY HISTORY. (SPECIAL PERIOD.)

#### *The Campaign of the British Army in France and Belgium up to 20th November 1914.*

Sir John French's Despatches.

Forty Days in 1914. By Major-General Maurice.

"1914." By Viscount French.

General Sketch of the European War. By Bellock.

The British Campaign in France, and Flanders, 1914. By A. Conan Doyle.

Nelson's History of the War.

Ypres. By the German General Staff.

Oxford Pamphlets. "August 1914. 'The Coming of the War.'" By Spenser Wilkinson.

Oxford Pamphlets 1914. No. VII.

" " " No. X.

The Times Documentary History of the War, Vol. V, Military, Part I, and Vol. VIII, Military, Part II.

Der Grosse Krieg. The Schlacht bei Mons (Grossen General-Stabes.)

Der Grosse Krieg. The Schlacht bei Mons Longwy (Grossen General Stabes.)

### *Development and Constitution of the British Empire.*

Historical Geography of the British Empire. By Hereford George.

Our Fighting Services. By Sir Evelyn Wood, v.c.

The Statesman's Year Book.

LUCAS, Sir C. P. The Beginnings of English Overseas Enterprise, 1917

MILLS, J. Saxon. The Future of the Empire, 1918.

POLLARD, A. F. The British Empire, 1909.

LUCAS, Sir C. P. The British Empire (6 lectures). 1918.

WILLIAMSON, J. A. The Foundation and Growth of the British Empire, 1918.

WOODWARD, W. H. The Expansion of the British Empire, 1907.

LUCAS, Sir P. C. Historical Geography of the British Colonies (Dominions). 7 Volumes. 1906-17.

Vol. 1—Mediterranean.

Vol. 2—West Indies.

Vol. 3—West Africa.

Vol. 4—South Africa.

Vol. 5—Canada.

Vol. 6—Australia.

Vol. 7—India.

## ***Secretary's Notes.***

iii

- KNIGHT, E. F. *Oversea Britain*, 1907.
- MACKINDER, H. J. *Britain and the British Seas*, 1907.
- EGERTON, H. E. *The Origin and Growth of the English Colonies and of their system of Government*, 1903.
- JENKS, E. *The Government of the British Empire*, 1918.
- JENKS, E. *A Short History of Politics*, 1900.
- DICKY, A. V. *Introduction to the Study of the Law of the Constitution*, 1908.
- BAGEHOT, W. *The English Constitution*, 1909.
- SEELY, Sir J. *The Expansion of England*, 1883.
- LOWELL, A. Lawrence. *The Government of England*, 1912.
- LYALL, Sir A. C. *The Rise and Expansion of the British Dominion in India*, 1894.
- HUNTER, Sir W.W. *A Brief History of the Indian Peoples*, 1907.
- FORTESCUE, Hon. J.W. *A History of the British Army*, 8 Vols, 1899-1917. (In progress).
- CORBETT, Sir Jaulian. *England in the Seven Years War*, 1907.
- MAHAN, Rear-Adm. A. T. *The Influence of Sea Power Upon History* 1890.
- FROUDE, J. A. *The English in the West Indies*, 1888.
- GRANT, W. L. *History of Canada*.
- BRADLEY, A. G. *The Making of Canada*, 1908.
- WILSON, B. *Nova Scotia*, 1911.
- LUCAS, Sir C. P. *Report on British North America*. By Lord Durham.
- HOGARTH, Prof. W. G. *The Nearer East*, 1902.
- BRAND, R. H. *The Union South Africa*, 1909.
- KELTIE, J. Scott. *The Partition of Africa*, 1909.
- CROMER, Lord. *Modern Egypt*, 1908.
- CAMERON, D. A. *Egypt in the Nineteenth Century*, 1898.
- COLQUHOUN, A. R. *The Mastery of the Pacific*, 1902.
- SCOTT, Ernest. *Short History of Australia*.
- LORD, Walter, F. *The Lost Possessions of England*, 1896.
- JENKS, E. *A History of the Australasian Colonies*, 1912.
- FAWCETT, C. B. *Frontiers*, 1918.
- KEITH, A. B. *Selected Speeches and Documents on British Colonial Policy*. 2 Volumes, 1918.

Colonial Office List.

Whitaker's Almanack.



**III.—Payment for Articles in the Journal.**

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 400 is awarded for articles and reviews published in each Quarterly Journal.

**IV.—Contributions to the Journal.**

With reference to Army Regulations, India, Volume II, paragraph 487, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Institution of India are informed, that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee. Contributors are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

Contributors must have their articles either typed or printed.

2. It has been decided to introduce two new items in the Journal headed—

- i. Criticisms
- ii. Notes on current Military and Naval questions.

The rules for (i) to be—

That the criticism should be headed with the title of the article criticised, and the date of the Journal in which published.

That criticisms should be signed with a nom-de-plume, but that critics must disclose their identity to the Secretary.

The rules for (ii) to be the same as for Articles.

**V.—Library Catalogue.**

The library catalogue revised up to 1st January 1916 is now available. Price Rs. 2 or Rs. 2-4-0 per V.P.P. A list of books received each year is published with the January Journal.

**VI.—Gold Medal Prize Essay 1920-21.**

For subject and conditions please see page IV.

**VII.—Army List Pages.**

The U. S. I. is prepared to supply members and units with manuscript or typewritten copies of Indian Army List pages, at the following rates:—

Manuscript, per page Re. 1.

Typewritten, per page Rs. 2.

## Secretary's Notes.

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### VIII.—Books.

<i>Title.</i>	<i>Sec.</i>	<i>No.</i>	<i>Author.</i>
Military Law made easy.	...	T. 505	Lt.-Col. Banning.
<i>Presented by Messrs. Gale &amp; Polden.</i>			
A soldiers Eyevlew of our Armies	...	N. 486	Presented by the Author Lt.-Genl. Sir John Keir, K. C. B.
A Brief History of the Indian Peoples.	...	N. 488	Sir W. W. Hunter.
Govt. of the British Empire	...	N. 488	Edward Jenks.
Times Documty History of the War. (2 Volumes)	...	M. 955	The Times.
The Direction of War.	...	S. 282	Major-Genl. W. Bird.
<i>Presented by Cambridge University Press.</i>			
The Horse and the War.	...	W. 57	Capt. S. Galtrey.
<i>Presented by Sir John Moore.</i>			
British Field Ambulance etc. Amended to June 1920.	A.	237	Presented by Govt. of India.
Allenbys Final Triumph	...	M. 958	W. T. Messey.
The Story of the Fourth Army.	...	M. 956	Major-Genl. Sir A. Montgomery.
Gallipoli Diary. (2 Vols).	...	M. 960	Sir Ian Hamilton.
The Origin and Growth of the British Dominions.	...	N. 490	Hugh E. Egerton.
The Union of South Africa.	...	N. 491	The Hon. R. H. Brand.
Cape of Good Hope.	...	F. 363	Presented by corporation City Hall, Capetown.

#### *Presented by Major-Genl. Sir Alfred Bingley K.C.I.E., C.B.*

Record Book of the Scinde Horse. (Irregular) 2 Vols.	...	O. 209.	
The Army on Itself. (Published 1904).	...	A. 236.	H. A. Gwynne.
Germany & England. (Published 1914).	...	N. 489.	J. A. Cramb.
The Defence and Defensive Positions. (Published 1900).	...	M. 957	Capt. F. M. Edwards.
Nafbat 'L-Yaman (Brezées from Yemen) Published 1907.	...	Pt. I. H. 50	Lt.-Col. D. G. Phillott.
The Conduct of War. (Published 1899).	...	S. 280	Lt.-Genl. Von der Goltz.
Modern Strategy. (Published 1904)	...	S. 281	Lt.-Col. W. H. James.

**Secretary's Notes.**

<i>Title.</i>	<i>Sec.</i>	<i>Author.</i>
Urdu Prose Composition. Published 1895.	Q.	Ranking.
Hinduism. Published 1877.	C.	Mr. Williams.
Cassells Dictionary:—		
German-English.		
English-German.	Q.	Cassells & Co.
Bagh-O-Bahar (Pt. I & II (3 copies). Published 1901-1902.	H.	Lt.-Col. Ranking.
Anglo-Chinese Phrase Book etc. (Yunnanese dialect).	Q.	Bentley.
Russian Grammar. Published 1900.	Q.	F. Alexandrow.
First step in Burmese. Published 1904.	Q.	A. W. Sonsdale.
A Grammar of the Persian Tongue. Pt. I and Pt. II. Published 1882- & 1886.	Q.	P. G. Taskar.
Punjabi Bat Chit. Published 1897.	Q.	Pandit Sardha Ram.
Cours Pratique de Chinois (Langue Mandarine de Pekin).	Q.	From French Oriental. School Lectures.
School of Economics (Certain subjects taught to officers) Published 1909.		Capt. M. Synge.
Specimen Papers for Examination in Hindi Published 1899.	Q.	Lt.-Col. G. S. A. Ranking.
Burmese Language. Published 1898.	Q.	Taw Sein & Co.,
Candidates Aid to the Lower and Higher Examinations in Urdu. Published 1901.	Q.	Jawahir Singh.
English to Punjabi Dictionary Published 1898.	Q.	—do—
Complete Russian-English Dictionary. Published 1885.	Q.	A. Alexandrow,
Examination Papers Staff College 4 copies 1904, 1905, 1906 and 1907.	T.	S. College.
Manual of Pushtu (Published 1901).	Q.	Major G. Ross-Keppel.
Translation of the Gunj-I-Pakhtu No. 3 Published 1907.	H.	—do—
Iqd-I-Gul (Selection from the Gulistan)	H.	J. S. Jarrett.
The Zulu War. 1897.	M.	Prepared in Q.M.G's. Dept. H. G. W. O.
The People's War in France 1870-71.	M.	Col. Lousdale Hale.
<i>Presented by Major C E. L. Johnston R. A., November 1920.</i>		

## MILITARY WIDOWS' FUND, BRITISH SERVICE.

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The Military Widows' Fund, British Service, was established in India in 1820 to alleviate the distress of families of officers of the British Service *serving in India*, and to enable them to return to England without unnecessary delay. Whenever an officer of the British Service, who is a subscriber to the Fund, dies, his family receives at once the following assistance, namely:—

Six months maintenance allowance ranging from Rs. 2,400 to Rs. 3,600 according to the rate subscribed, plus Rs. 1,500 as a donation for the widow, plus Rs. 500 or Rs. 300 as a donation for each child according to whether the child is over 12 and under 21 years of age or under 12 years of age.

These benefits are secured by a small subscription of Rs. 4. 3 or 2 per mensem, which is regulated by the amount of pay an officer draws. An officer, on becoming a subscriber, secures for his wife and children quite irrespective of his length of service in India, the full benefits of the Fund in case of his death after having subscribed for fully three months. In the event of an officer dying within that period, his case is specially considered by the Committee of General Management.

Copies of the regulations of the Fund and other particulars relating thereto can be obtained from the Secretary at Simla.

# United Service Institution of India.

## GOLD MEDAL ESSAY COMPETITION 1920-21.

The Council have chosen as the subject for the Gold Medal Essay for 1920-21 the following:—

### INDIA AND THE NEXT WAR.

The following are the conditions of the competition:—

- (1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army, and Royal Air Force or Indian Defence Force who are members of the U. S. I. of India.
- (2) Essays must be printed or type-written and submitted in *triplicate*.
- (3) When a reference is made to any work, the title of such work is to be quoted.
- (4) Essays are to be *strictly anonymous*. Each must have a motto, and enclosed with the essay there should be sent a *sealed* envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1921.
- (6) Essays will be submitted for adjudication to 3 Judges chosen by the Council. When the decisions of the 3 Judges are received the Committee will submit the four essays, placed first in order by the Judges, with their recommendations on the award of the Gold Medal to the Council, who will decide whether the Medal is to be awarded and whether the essay may be published.
- (7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1921.
- (8) All essays submitted are to become the property of the United Service Institution of India, *absolutely* and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (9) Essays should not exceed about 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

By order of the Council,

SIMLA, }

W. L. J. CAREY, LIEUT.-COL., R.A.,

30th Sept. 1920. }

Secretary, U. S. I. of India.

# United Service Institution of India.

## PRIZE ESSAY GOLD MEDALLISTS.

*(With rank of Officers at the date of the Essay).*

- 1872...ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.  
1873...COLQUHOUN, Capt. J. A. S., R.A.  
1874...COLQUHOUN, Capt. J. A. S., R.A.  
1879...ST. JOHN, Maj. O. B. C., R.E.  
1880...BARROW, Lieut. E. G., 7th Bengal Infantry.  
1882...MASON, Lieut. A. H., R.E.  
1883...COLLEN, Maj. E. H. H., s.c.  
1884...BARROW, Capt. E. G., 7th Bengal Infantry.  
1887...YATE, Lieut. A. C., 27th Baluch Infantry.  
1888...MAUDE, Capt. F. N., R.E.  
YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).  
1889...DUFF, Capt. B., 9th Bengal Infantry.  
1890...MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Contingent.  
1891...CARDEW, Lieut. F. G., 10th Bengal Lancers.  
1893...BULLOCK, Maj. G. M., Devonshire Regiment.  
1894...CARTER, Capt. F. C., Northumberland Fusiliers.  
1895...NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.  
1896...BINGLEY, Capt. A. H., 7th Bengal Infantry.  
1897...NAPIER, Capt. G. S. F. Oxfordshire Light Infantry.  
1898...MULLALY, Maj. H., R.E.  
CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).  
1899...NEVILLE, Col. J. P. C., s.c.  
1900...THULLIER, Capt. H. F., R.E.  
LURBOCK, Capt. G., R.E., (specially awarded a silver medal).  
1901...RANKEN, Lieut.-Col. G. P., 46th Punjab Infantry.  
1902...TURNER, Capt. H. H. F., 2nd Bengal Lancers.  
1903...HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.  
BOND, Capt. R. F. G., R.E., (specially awarded a silver medal).  
1904...MACMUNN, Maj. G. F., D.S.O., R.F.A.  
1905...COCKERILL, Maj. G. K., Royal Warwickshire Regiment.  
1907...WOOD, Maj. E. J. M., 99th Deccan Infantry.  
1908...JEUDWINE, Maj. H. S., R.A.  
1909...MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.  
ELSMIE, Maj. A. M. S., 56th Rifles, F. F., (specially awarded a silver medal).  
1911...MR. D. PETRIE, M.A., Punjab Police.  
1912...CARTER, Major B. C., The King's Regiment.  
1913...THOMSON, Major A. G., 58th Vaughan's Rifles (F. F.)  
1914...BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs, (F. F.)  
NORMAN, Major C. L., M.V.O., Q.V.O., Corps of Guides  
(specially awarded a Silver medal).  
1915...No award.  
1916...CRUM, Major W. E., V.D., Calcutta Light Horse.  
1917...BLAKER, Major W. F., R.F.A.  
1918...GOMPERTZ, Capt. A. V., M.C., R.E.  
1919...GOMPERTZ, Capt. M. L. A., 108th Infantry.  
1920...KEEN, Lt.-Col. F. S., D.S.O., 2/15 Sikhs.



## MACGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June:—

(a) For officers—British or Indian | silver edalm.

(b) For soldiers—British or Indian—a silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief as Vice-Patron, and the Council of the United Service Institution, who were appointed administrator of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.\*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.

### *Note.*

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

### **MacGregor Memorial Medallists.**

*(With rank of Officers at the date of the Award).*

1889...BELL, Col.M.S., V.C., R.E. (specially awarded a gold medal).

1890...YOUNGHUSBAND, Capt. F.E., King's Dragoon Guards.

1891...SAWYER, Major H. A., 45th Sikhs.

RAMZAN KHAN, Havildar, 3rd Sikhs.

1892...VAUGHAN, Capt. H. B., 7th Bengal Infantry.

JAGGAT SINGH, Havildar, 19th Punjab Infantry.

1893...BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).

FAZALDAD KHAN, Dafadar, 17th Bengal Cavalry.

1894...O'SULLIVAN, Major G. H. W., R.E.

MULL SINGH, Sowar, 6th Bengal Cavalry.

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\*N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves; also those serving in Auxiliary Forces, such as the Volunteers and Corps under Local Governments. Frontier Militia Levies and military Police, also all ranks serving in the Imperial Service Troops.

### **MacGregor Memorial Medallists—*contd.***

- 1895...DAVIES, Capt. H. R., Oxfordshire Light Infantry.  
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896...COCKERILL, Lieut. G. K., 28th Punjab Infantry.  
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897...SWYAYNE, Capt. E. J. E., 16th Rajput Infantry.  
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898...WALKER, Capt. H. B., Duke of Cornwall's Light Infantry  
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899...DOUGLAS, Capt. J. A., 2nd Bengal Lancers.  
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900...WINGATE, Capt. A. W. S., 14th Bengal Lancers.  
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901...BURTON, Major E. B., 17th Bengal Lancers.  
SUNDAR SINGH, Colour Havildar, 31st Burma Infantry.
- 1902...RAY, Capt. M. R. E., 7th Rajput Infantry.  
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903...MANIFOLD, Lieut.-Colonel C. C., I.M.S.  
GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904...FRASER, Capt. L. D., R.G.A.  
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905...RENNICK, Major F., 40th Pathans, (specially awarded a gold medal).  
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906...SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.  
GHAFUR SHAH, Lance-Naik, Q.O. Corps of Guides Infantry.
- 1907...NANGLE, Capt. M. C., 92nd Punjabis.  
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908...GIBBON, Capt. C. M., Royal Irish Fusiliers.  
MALANG, Havildar, 56th Punjabi Rifles.
- 1909...MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910...SYKES, Major P. M., c.m.g., late 2nd Dragoon Guards.  
(specially awarded a gold medal).  
TURNER, Capt. F. G., R.E.  
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911.. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.  
GURMUKH SINGH, Jemadar, 93rd Burma Infantry.

### **MacGregor Memorial Medallists—Contd.**

- 1912...PRITCHARD, Capt. B.E.A. 83rd Wallahjabad Light Infantry  
(specially awarded a gold medal).  
WILSON, Lieut. A. T., c.m.g., 32nd Sikh Pioneers.  
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913...ABBAY, Capt. B. N., 27th Light Cavalry.  
SIRDAR KHAN, Sowar, 39th (K.G.O.) Central India Horse.  
WARATONG, Havildar, Burma Military Police (specially  
awarded a silver medal).
- 1914...BAILEY, Capt. F. M., I.A. (Political Dept.)  
MORSHEAD, Capt. H. T., R.E.  
HAIDAR ALI, Naick, 106th Hazara Pioneers.
- 1915.. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.  
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916...ABDUR RAHMAN, NAIK, 21st Punjabis.  
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.)  
(Specially awarded a Silver Medal).
- 1917...MAIN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918...NOEL, Capt. E. W. C., Political Department.
- 1919...KEELING, Lt.-Col. E. H., M.C., R.E.  
ALLA SA, Jamadar, N. E. Frontier Corps.
- 1920...BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.  
AWAL NUR, C. Qm. Havildar, 2nd Bn. Q. V. O. Corps of  
Guides. (Special gratuity of Rs. 200.)

# **The Journal**

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## **United Service Institution of India.**

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### **GOLD MEDAL PRIZE ESSAY 1919-20.**

**(Awarded Gold Medal)**

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Under K. R. 106 Commanding Officers are responsible for the systematic and efficient instruction of officers under their command all professional duties, and for their due preparation for examination for promotion.

Having regard to the extended scope of an officer's professional duties since the war, is the system above indicated, the one best calculated to secure the efficiency to be arrived at, and if not, what system of instruction should take its place?

BY

LT.-COL. F.S. KEEN, D.S.O.

2/15 SIKHS.

MOTTO.

*"Experientia Docet."*

*Introduction.*

1. Before coming to a decision as to the adequacy or otherwise of our system of training officers, it seems necessary to investigate not only the extended scope of an officer's professional duties due to the war, but also the past results of the existing system. If it has succeeded in giving us officers as well trained as we have a right to expect, well and good, but if it has fallen short of this, and we can ascertain the cause, it will help us in putting forward useful suggestions for the future.

2. The subject is dealt with as follows:—

In section I the existing system is briefly described and analysed, and its merits and defects discussed.

In section II the results of this system, as seen in the great war, are considered, and an attempt is made to show that improvement in certain respects is necessary.

## **Gold Medal Prize Essay.**

In section III the standard of professional education required of an officer in modern times is dealt with.

In section IV suggestions for the future are put forward.

### SECTION I.

#### *The existing System.*

3. Under the existing system an officer, before obtaining his commission, goes through a course of training at a Cadet College, commencing when he is about 17 or 18 years of age and lasting some eighteen months.

This period was reduced to six months during the war, but presumably the pre-war system will be reverted to. At the Cadet College, Woolwich in the case of Artillery and Engineers, Sandhurst in the case of Cavalry and Infantry, he is taught the elements of strategy and tactics, and gets a thorough grounding in drill, musketry, and other kindred subjects. Equitation, fortification and field engineering, field sketching, law and administration are also taught, and for officers destined for the Indian Army, Urdu. Thus our young officer joins his unit fairly well grounded in the most essential subjects. Thereafter the main part of his training is carried out in the unit. There are certain schools and courses of instruction at which every officer has to qualify, e. g., Small Arms schools for instruction in musketry, the Lewis and Hotchkiss gun and bayonet fighting, equitation and gunnery courses for cavalry and artillery officers. Other schools are provided for officers who wish to specialise in such subjects as signalling and physical training, but these are not obligatory. For instruction in strategy, military history, tactics, law and administration the commanding officer of the unit is held responsible. The efficiency of the instruction is tested by making officers pass qualifying examinations for promotion. The details of these examinations are contained in King's Regulations, Appendices X to XV. Officers of the Indian Army also have to pass a professional and a language test before being qualified for retention therein. (A.R.I. Vol. II paras 311 and 313.)

Only those officers who are specially selected as suitable for staff employ get an opportunity later in their career of

studying their profession at a Staff College, under selected instructors and apart from the distractions of regimental work.

An India Army Order published on 30th April 1920 notifies certain changes, viz (1) the abolition of the promotion examination from 2nd Lieutenant to Lieutenant, the test of a young officer's fitness for retention in the service and for promotion to Lieut. being the Annual Confidential Report of his Commanding Officer; (2) The abolition of the examination for tactical fitness for command, and the substitution of a course at a "Senior Officers' School".

Courses at Army Schools of Education are also introduced, but the subject under discussion is professional duties only.

4. An analysis of this system shows that it is composed of 5 elements:--(1) A preliminary course at a Cadet College (2) Regimental Instruction, (3) Courses of Instruction in more or less technical subjects, (4) promotion examinations, (5) Advanced instruction at a Staff College for selected officers only.

The foundation of the system is regimental instruction, and the soundness of this principle must be at once admitted. The nearer we can approach to the ideal of every commander himself training the men he will lead in action, the more efficient will our army be. But we see at once that it is a principle which has not in the past been adhered to in its entirety, and the mention of a course at a Senior Officers' School in the Indian Army Order referred to foreshadows a further departure from it in the immediate future. Up to the beginning of the present century every officer had to go through a "Garrison Course" of about 2½ months duration before going up for his examination for promotion to Captain.

5. Before proceeding to discuss the merits and demerits of each of the elements of our system, let us first consider on broad lines what are the requirements of a system of military training of officers. This training falls naturally under 2 main heads, the study of principles and the practice of their application. These two must go hand in hand and the balance must be carefully maintained. The bent of the British officer is towards practice rather than study, but the latter must not be neglected for principles can only be absorbed by study, followed by de-

monstration and practice in their application. Over-indulgence in study is apt to lead to pedantry, which must at all costs be avoided. Training must be systematic and progressive, and it must be made interesting. Variety must be introduced, and it must not be too continuously strenuous, or interest will flag. To attempt to assimilate knowledge of a variety of subjects in a short space of time, "Cramming" as it is usually termed, for examination or other purposes, is contrary to the true principles of training. It leads rather to mental indigestion than to efficiency. Another important point is to ensure a certain degree of uniformity of method. In the existing system this is more or less ensured by supervision by General and Staff Officers.

6. Let us now consider each of the component parts of our existing system, commencing with regimental instruction, which may be called the root of the system. It is by working together that men get to know each other best, and mutual knowledge breeds mutual trust. Therefore regimental instruction should be retained as the bedrock of our system of training both officers and men. But regimental instruction has its limitations, the chief of which is, in the opinion of the writer, that it has a tendency to teach officers to rely too much on formulae at the expense of root principles. It is true that our Field Service Regulations and training manuals are full of principles, and admirably free from formulae, but that is not enough. In order that the principles set forth in the text books may be intelligently applied they must be thoroughly understood. To enable our young officers thoroughly to grasp these principles, opportunity for systematic study under competent instructors must be afforded. In most units both the opportunity for systematic study and the competent instructors are lacking. The majority of regimental officers, certainly in India, are deplorably ignorant of the principles so clearly expressed in, our Training and Manoeuvre Regulations. Some men have a natural gift for imparting instructions, but they are the exception. It is a science in itself requiring study and practice. Instruction of officers is carried out in all units, but its value undoubtedly varies. Too often it consists far more of merely practising formulae than in studying



root principles and practising their application. The battalion has a more or less "set piece" formula for an advanced guard in flat country, another for an advanced guard in the frontier hills, another for a rearguard, another for the attack another for the defence, and so on. Doubtless the conduct of the attack varies. One day the "walking attack" is carried out, another day "advancing by alternate rushes". But in far too many cases the underlying principles are neither clearly explained nor thoroughly understood.

7. In 1917 G. H. Q. in France tried an experiment in substituting formulae for principles. A pamphlet was issued entitled "The normal formation for the attack" which cancelled section 114-1 of Infantry Training. "It is impossible, as well as highly undesirable, to lay down a fixed and unvarying system of battle formations. General principles and broad rules alone are applicable to the tactical handling of troops in war". This was cancelled, and a formula substituted. But the experiment was obviously not considered a success, for in February 1918 appeared S. S. 143 "The Training and employment of platoons", in which formulae were altogether banned, and principles likely to be useful to a platoon commander were put forward more lucidly than in any British text book or pamphlet that had hitherto appeared. "The conditions of a modern battle are so varied that it is only possible to lay down the principles on which the various formations successfully adopted in the past are based. Commanders should study these principles, and apply them to each particular case".

8. This last quotation expresses the point admirably. In order to appreciate the principles on which past successes have been based, it is necessary to study military history. Bald statements of fact are not sufficient to drive the principles home and impress them on the mind of an officer in such a way that "whenever he has to come to a decision in the field, he instinctively gives them their full weight" (F. S. R. I sec. I (1).) Officers capable of imparting instruction on these lines are not to be found in all regiments. In all training, explanation and demonstration should precede execution, and the explanation

and demonstration of principles cannot in many cases be effectively carried out in the unit.

9. A striking example of the tendency of the training of the British officer to degenerate into formulae is the case of warfare against the tribes of the North Western Frontier of India. In pre-war days knowledge of this form of warfare was practically confined to certain regiments which had spent many years on the Frontier, and as a result of long experience had evolved certain methods of safeguarding the flanks of a column on the march, a force at rest, and of conducting a withdrawal. These methods were adopted by other units unaccustomed to Frontier fighting, but in the majority of cases the principles on which the methods were based were not understood, and numerous instances could be quoted of mishaps due to failure to apply the method correctly to the situation. It is true that there were books dealing with the subject, notably Callwell's "Small wars, their principles and practice", but books alone, even if universally studied, are not sufficient. However clear the explanation, demonstration is lacking, and the execution is in consequence liable to be faulty.

10. Then arose, in 1916, the "Mountain Warfare School" at Abbottabad, and it is hardly an exaggeration to say that it effected a metamorphosis in the training of officers throughout the army in India. The popularity of the school is the best testimonial for its teaching, there were always more volunteers than vacancies. The writer has not been privileged to go through the course, but he has visited the school, seen it working, and studied the notes on the system of instruction. In his opinion its striking success is due to the fact that the instruction began with the explanation of the root principles. These were brought home to the students by illustrations from past campaigns demonstrated on the sand model, and finally the methods of applying the principles were practically illustrated by means of demonstration troops.

11. Even where highly qualified and thoroughly efficient instructors are available, it is well nigh impossible to make regimental training of officers systematic. The commanding Offi-

cer, or another officers deputed by him, may draw up a programme of instruction comprising a progressive course of lectures and exercises on the sand model and on the ground, but when it comes to carrying it out, it is found that station or other duties, leave, etc., interfere with the regular attendance of officers. If the programme has been properly drawn up on progressive lines, the missing of one link in the chain mars the instructional value of the whole course. Regimental instruction is inevitably spasmodic.

12. Again a proper knowledge of the tactics of other arms, essential to ensure co-operation, cannot be acquired regimentally. It is true that the periodical attachment of officers to other arms was advocated before the war, but even where this was carried out, it was usually some what perfunctory. The attached officer was as a rule confined to a spectator's role, and had no opportunity of acquiring a practical working knowledge of the methods of the arm to which he was attached.

13. So much for the merits and shortcomings of regimental instruction. Let us glance at the other elemental parts of the system.

*The Cadet College Course.* If we compare our system with that of continental nations, we find that in most cases, e.g., French, German and Japanese Armies, they have both junior and senior cadet schools or colleges, and that candidates for army commissions begin a military, or quasi military education at the same age as do our own Naval cadets at Dartmouth and Osborne, viz, at about 13 years. It is necessary or advisable to introduce something of the sort into our own system of army education? In the opinion of the writer it is not. The vast majority of our cadets are Public School boys, and the British public school system, which does not exist on the continent, gives them as sound a preliminary education as can be devised. They have probably been members of the Officers Training Corps, with its quasi-military atmosphere, and in their games have learnt the importance of combination and playing for their side.

14. As regards the cadet course at Woolwich and Sandh-

### ***Gold Medal Prize Essay.***

urist, it seems to be on thoroughly sound lines. One thing the writer would like to suggest is that it would be a great advantage from the point of view of co-operation between the arms if the cadet colleges for all branches could be amalgamated. Expense probably prohibits the acquisition of additional land and buildings either at Woolwich or Sandhurst, but there seems no reason why cadets, cavalry, artillery, royal Engineers and infantry should not graduate at both colleges, instead of as at present.

15. *Courses of instruction in more or less technical subjects.* These will always be a necessary supplement to regimental instruction. The essential point is that these schools must keep up to date.

16. *Promotion Examinations.* It is a question, whether these are really a reliable test either of the system of instruction in a unit, or of the efficiency of the officers examined. They lead more than anything else to cramming and the quest for formulae, and in the opinion of the writer their abolition would be an advantage, if any more suitable substitute can be found. In pre-war days the commanding officer's effort at preparing an officers for a promotion examination too often took the form of a threat to stop his leave until he passed.

The candidate then approached the nearest accessible p. s. c. officers with a request for assistance. The p. s. c. man probably recommended the perusal of some such works as Griepenkerl's "Letters on applied Tactics", Pratt's "Military Law", Banning's "Organization". The candidate might or might not wade through these, but he probably spent far more time looking up past examination papers to see the kind of conundrum set, and he who did not approach his practical examination in tactics arms with some such set of formulae as "Trench's manoeuvre orders" and a sample "Appreciation of the situation", was certainly the exception. These are not the methods by which a sound knowledge of the science of war is attained. Item II of the Secretary's notes in the U. S. I Journal indicates the general procedure in vogue.

17. *Staff College instruction.* In the experience of the writer this has always been on sound and practical lines, and

is becoming sounder and more practical as experience is gained. The pity is that so few officers can avail themselves of this unique opportunity of studying their profession. As regards the course itself, it is suggested that its value would be enhanced if demonstration troops were used in conjunction with the schemes. Again it is submitted that the competitive entrance examination is not a true test of the qualifications of the candidates, and forces officers to spend money on that vicious form of training, cramming.

## **SECTION II.**

### *The results of the system as shown by the Great War.*

18. Before proceeding to a discussion of the results of the existing system as seen in the Great War, the writer wishes to place on record his unbounded admiration for the many sterling qualities of the British Officer. His courage, his energy, his loyalty, and his cheerfulness under the most trying conditions. These qualities which are partly innate and partly due to his upbringing, combined with mutual trust between officers and men, which is mainly the result of regimental training, have won the war for us. We have the finest material of any nation in the world for officers. Let us now consider whether the existing system of training has succeeded in making the best of that material.

19. It seems to the writer that there is one lesson of the great war which stands out above all others, and that is the vital necessity that officers of all grades should be thoroughly trained. This is no new thing. Any one who studies the literature of the campaigns of 1866 and 1870 will find it brought out as the great lesson of those wars. The late Colonel Henderson in "The Science of War" wrote as follows of the 1870 campaign. "To what did the Germans owe their uninterrupted triumph? What was the cause of the constant disasters of the French? What new system did the Germans put in practice, and what are the elements of success of which the French were bereft? The system is, so to speak, official and authori-

tative amongst the Germans. It is the initiative of the subordinate leaders. This quality, which multiplies the strength of an army, the Germans have succeeded in bringing to something near perfection. It is owing to this quality that, in the midst of varying events, the supreme command pursued its uninterrupted career of victory, and succeeded in controlling, almost without check, the intricate machinery of the most powerful army that the 19th century produced. In executing the orders of the supreme command, the subordinate leaders not only did over and over again more than was demanded of them, but surpassed the highest expectations of their superiors, notably at Sedan. It often happened that the faults, more or less inevitable, of the higher authorities were repaired by their subordinates, who thus won for them victories which they had not always deserved. In a word, the Germans were indebted to the subordinate leaders that *not a single favourable occasion throughout the whole campaign was allowed to escape unutilised.*

20. It would be both futile and invidious to attempt to compare the officers of the British Armies with those of other armies on either side in the great war. The true lessons of the war have yet to be deduced, and feeling still runs too high. But it seems safe to say that the verdict of history on the conduct of the British armies will contain no such paragraph as the concluding words of the above quotation. Let us briefly consider one incident, the failure to capture the DUJAILAH redoubt in March 1915. A British force did a night march across the desert with the object of capturing this important point with a view to the relief of Kut. The surprise was complete. One column found itself at dawn within sight of the redoubt, which was so lightly held that there seems no room for doubt that an immediate assault must have succeeded. But the guns had been left behind, and the orders were that the assault should be preceded by a bombardment. These orders were adhered to in spite of the altered circumstances, the delay gave the Turks time to reinforce the threatened spot, and the opportunity was lost.

The writer does not wish to raise the question who was to

blame, but it does seem pertinent to consider whether such a thing could have occurred if all the officers in the force had been trained to the same pitch as the German officers of 1866 and 1870.

21. To quote from other theatres of war, it must surely be admitted that at TANGA and the SUVLA BAY landing and at the first and second battles of Gaza there appears to have been a sad lack of that trained initiative on the part of subordinate leaders which is capable of retrieving the mistakes of the higher authorities.

22. The campaign in France was on so vast a scale that it is easy to quote definite instances of failure, to illustrate the contention, but the following quotations from comments made by the enemy and also by our own high command seem to point to the same conclusion, viz, that the training of our officers fell short of the high standard which the Germans in 1870 showed to be humanly possible of achievement.

23. The following are extracts from German documents captured on the Somme battlefields in September 1916:—"The individual English soldier is well trained and shows personal bravery. The majority of the officers, however, are not sufficiently trained. They are lacking in ability to exploit a success and to follow it up quickly."

Another such document says:-

"English commanders in difficult situations showed that they were not yet equal to their tasks. The men lost their heads and surrendered if they thought they were cut off".

24. The notes published by our own General Staff on the operations in France in 1918 indicate that in many cases we lost valuable opportunities, owing to the failure of officers of all grades to grasp the principles of warfare. A note on the German attack of 21st March, published on the 5th April, contains the following passages, "The enemy attacked over a very wide front in considerable strength, but he drove in with special strength on certain selected points, and at these forced his way into our positions by sheer weight of numbers, with the result that he made



pockets outflanking the sectors to right and left. In many cases where this happened the flanking troops were withdrawn from the tactical points they were still holding, and a frontal counter attack was launched by the troops in reserve against the enemy in accordance with a pre-arranged plan, which was not in any way changed to meet the actual situation.

Lack of appreciation of the necessity for strengthening the flanks of gaps made by the enemy in local penetrations of our positions was responsible for many withdrawals from tactical points, the possession of which was necessary to the enemy to enable him to continue his advance. Too much reliance was placed upon the doctrine of the continuous line at the expense of the principles of the use of ground and defence in depth of tactical features.

It is as necessary to cover movement by fire in a withdrawal as it is in an advance. This principle was often neglected, and there were many instances in which troops either fought to a finish or withdrew without fighting.

A withdrawal should always be covered if possible by a line of troops established on a definitely selected position."

25. The sterling qualities of the British officer give us a man full of soldierly virtues, and full of initiative, if only he knows what is required of him. Initiative is perhaps the most valuable asset in an officer, but if training is inadequate or faulty, initiative will either be altogether lacking, or else it will run on the wrong lines, and be a danger instead of an asset. Surely the above-quoted extracts from the General Staff memorandum on the operations of March 1918 indicate that, even at that late period of the war, the initiative of our officers was in too many cases lacking or faulty owing to inadequate training. They were not the men to withdraw if they realized the necessity for hanging on, but their ignorance of the principles of war was such that they failed to grasp the necessities of the situation, fell back unnecessarily from important tactical points, and by so doing jeopardized the whole of the allied armies in France.

26. The number of schools and classes of instruction which

were established in the United Kingdom, in France, in India, in Mesopotamia for the instruction of officers from 1916 onwards is sure proof that it was brought home to commanders of all grades that officers must be better educated, and also that the whole of their education cannot be carried out in the unit. These schools and classes were not confined to technical and specialist subjects, nor to the education of new army officers. In England, besides the senior and junior staff schools at Cambridge, there was a school for the training of senior infantry regimental officers to be battalion commanders at Aldershot, another for the training of R. A. officers to be battery commanders at Salisbury Plain. and special courses were held for the higher training of Lieut-Colonels and Majors.

In France each Army had its infantry school for the training of officers as company commanders, and an artillery school for the training of instructors. Each corps had its infantry school for training platoon commanders (S. S. 152 sec. 3). In India schools were established on somewhat similar lines, of which the Mountain Warfare School has already been referred to.

### SECTION III.

#### *The professional requirements of an Officer.*

27. In Section II an attempt has been made to show that the existing system has failed to produce from the magnificent material at our disposal officers as fully qualified to perform their duties in war as is humanly possible. The tactical side of these duties only has been dealt with, but the importance of the training of officers in administrative subjects, transport, supply, billeting, hygiene, etc., has been emphasised in this war more than in any other in history. Beyond referring to the report of the Mesopotamia Commission it seems unnecessary to labour this point. Let us now turn to a consideration of the standard of professional knowledge required of an officer in modern times.

28. The extent to which the lessons of the great war have extended the scope of an officer's professional duties is a complicated subject to discuss. It is pretty generally admitted that no new principles of war have been brought to light, and the soundness

of the principles laid down in our Field Service Regulations and Training Manuals has been vindicated in a striking manner by the events of the war. The history of every army employed in the great war bristles with instances of failure and mishap due to neglect of these principles. In October 1914 the Germans, aiming at the channel ports attacked simultaneously and with almost equal violence 4 points on the northern allied front, on the Yser, at Ypres, at La Bassée and at Arras, thereby departing from the principle of concentration. (Vide Nelson's History of the war, Vol. IV, chap. XXVI).

No man can say what the result would have been had they concentrated the weight of their attack on Arras or LaBassée, both of which offered excellent lines of approach to the goal and a break through at which points held out the prospect of isolating the northern portion of the allied line. All that is certain is that the German strategy, neglecting principles, failed, and it seems safe to say that the alternative gave better prospects of success. Again from March to July 1918 the Germans struck with staggering force, first towards Amiens, then on the Lys, then on the Aisne, then on the Marne, again dispersing their efforts. Surely persistence in the attack towards the strategic point of Amiens, where success would have severed the British from the French Armies, was more in consonance with the principles of strategy, and offered better hope of success.

The principles remain the same.—The danger of their neglect has been emphasised to a greater extent probably than in any other previous war, and surely a natural corollary to this is the increased necessity for all officers to study those principles.

29. When we turn to the practical application of principles the lessons of the war as regards the training of officers appear somewhat more definite. The aircraft has appeared for the first time as a weapon of war, and other weapons have developed rapidly. The chief developments are (1) the increased power and range of artillery, (2) the extension of the use of automatic small bore weapons, (3) the revival of trench howitzers and grenades, (4) the evolution of the tank, (5) the introduction of

gas and liquid fire The science of field fortification has assumed an importance hitherto undreamed of in war. Co-operation between artillery and infantry both in attack and defence has been developed into a fine art. The tactics both of attack and defence have undergone a searching investigation during over five years of intense fighting, and naturally considerable modifications have been made in the practical application of the principles. The number of different weapons with which the infantry are armed has increased, and in consequence the task of battalion, company and platoon commanders in leading and training their men has become vastly more complicated.

30. In appendix A an attempt has been made to tabulate the professional requirements which are common to all officers. In addition to these there are numerous special and technical subjects which certain officers must study which are outside the scope of this essay. This table does not pretend to be completely exhaustive, but is intended as a useful guide in deciding what our system of training officers should be, and also in drawing up the detailed syllabus for any military educational establishment.

#### SECTION IV.

##### *Suggestions for the future.*

31. Bearing in mind the standard of professional knowledge outlined in Appendix A, and accepting the fact that regimental instruction must remain the bedrock of our system, let us now turn to the consideration of what further modifications of that system are advisable in order to attain the most satisfactory results possible. A young officer normally joins his unit at the age of 19 or 20, having acquired at a Cadet college a smattering of the root principles of war. As a rule he is not very studiously inclined at this age, and it cannot be expected that the average youth will take either life in general or his profession so seriously as a man of more mature years. His time for the next 4 or 5 years will be best spent in the unit learning to train and command his men, and learning thoroughly the detailed application of the simpler principles to the tactics of his own arm of the service. During this period he should also attend courses at small arms and

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other schools to perfect his knowledge of the weapons with which his unit is armed.

32. The average officer probably begins to think seriously about the age of 25. The time has now come when he should be afforded an opportunity of going through a further course of instruction in the principles of war. This course must be more advanced than that at the Cadet College, and the tactics of the other arms must be studied so that the methods of co-operation may be thoroughly grasped. Administration too must be included. It seems to the writer that such an opportunity for study can only be afforded by the establishment of schools which all officers should be required to attend after the completion of say 4 years' regimental service and before promotion to Captain. The schools (which might be termed "Junior Officers' Schools") should, it is thought, be common for officers of all arms of the service. The details of the syllabus would naturally vary for officers of the different arms, but much of the instruction would be identical for all. As has already been said, men learn to know each other better by working together than by any other means, and it is to be hoped that these schools would result in a better mutual understanding all round, and the disappearance of a good deal of existing jealousy and suspicion.

33. It is not proposed to attempt to suggest a detailed syllabus for the course at these schools. Appendix A affords a useful working guide. It seems necessary to repeat that it is of the first importance to avoid any tendency towards pedantry at these schools. This can probably best be ensured by the affiliation to the schools of units of all arms as "Demonstration troops". This should result in the training being eminently practical, and for part of the course each officer should be attached to units of the other arms. That pedantry can be avoided has, it is thought, been proved during the war. A course at the "Mountain Warfare School" is certainly not conducive to pedantry. After the final operations in Mesopotamia in October 1918, of 9 officers who were immediately awarded the D. S. O., 6 had recently done a course at the infantry school at Baghdad. He would be a bold

man who dared to accuse Lords Haig and Rawlinson, and Sir William Robertson, three of our most highly educated soldiers, of being pedants.

34. The duration of the course at a "Junior Officers' School" needs very careful consideration. There is a great deal of instruction to be imparted, and there will also be a large number of officers to go through each course. It is thought that the pre-war garrison course, and also the course at most of the war-time schools, including the mountain warfare schools, were of too short duration. The instruction approached perilously near to "Cramming" When the schools are first started it will probably be necessary to experiment. It is suggested that in the first instance, as a trial measure, an officer should be detached from his unit for a nine months' course, divided into periods as follows:—

2½ months study at the School.

15 days leave.

2½ months study.

15 days leave.

3 months attachment to other arms.

The periods of leave are necessary both for students and instructors, and the suggested division of time would permit of two complete batches of officers being put through the course in a year, provided the school is in a place which permits of work all the year round.

35. Officers who are reported by their commanding officers as likely to be fitted for staff employ should be carefully watched and reported on at the Junior Officers' School, and, in addition to the three months, attachment to other arms, should be attached for a further period of three months to a Brigade or Divisional Staff. After completing the course they should return to their units for a year, and then be tried in junior staff appointments. It is thought that the combined reports from commanding officers, School Commandant and General Officers under whom they have actually served should offer a more reliable guide as to the advisability of admitting them to the Staff College than the pre-war competitive examination.

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36. Again, if these "Junior Officers' schools" are adopted, there seems no need for a promotion examination from Lieutenant to Captain. The annual confidential reports by commanding officers, combined with the report of the commandant of the school, should give a more reliable guide as to an officer's efficiency, than any examination results.

37 The next point for consideration is whether it is necessary for all officers to go through a further extra-regimental course of instruction as captains, if so what form this should take, and if not, what should be the test of fitness for promotion to major. This is the period during which selected officers as a rule pass through the Staff College. The normal duration of this course is two years. It might be found by experience that officers benefit so much by the course at the "Junior Officers' School" that it is possible to reduce the length of the Staff College course. If this could be reduced to a year without loss of efficiency, it would double the number of officers who could pass through the Staff Colleges without increasing the size or cost of those establishments. This would undoubtedly be of great benefit to the service, and would result in the great majority of our unit commanders being Staff College graduates. Apart from this suggestion, the feasibility of which time alone can show, it is not considered necessary for all officers to go through another extra-regimental course before promotion to major. In the cavalry and infantry the duties of a major are hardly more important or responsible than those of a captain. Whether a course is required for captains in the more technical arms is beyond the experience of the writer to decide. As regards fitness for promotion to major, it is once more thought that periodical reports are preferable to an examination.

38. We turn now to the last and most important step of all. The qualification for promotion to lieutenant colonel, or to command a unit. These two should, as far as cavalry and infantry are concerned, be synonymous terms. If an officer has qualified at a Staff College, no further course of instruction should be necessary. But all officers cannot undergo the staff college course,



and it seems necessary to provide some opportunity for an officer who has not been selected for a Staff College to qualify for command. In the India Army Order already referred to, the establishment of a "Senior Officers' School" is foreshadowed. What form should the instruction at such schools take, and what should be the duration of the course? in the opinion of the writer these schools would produce the best results if run in conjunction with the Staff Colleges and under the control of the commandants of those institutions, who would thus be in close touch with the higher education of all officers. The actual course of study might last three months, and should certainly be combined with a period of attachment to other arms.

39. In addition every officer, whether a Staff College graduate or not, should be tested in command of a mixed force. Where possible it seems far preferable that this test should not take the form of an examination lasting a few hours, but should consist of a period spent in command at collective training under the eye of a brigade or divisional commander.

40. Let us now take a bird's eye view of the progress of an officer's training under the proposed system and see how it fulfills the requirements outlined in Section I, para 5. The various steps are as follows:—

- (a) A preliminary course at a Cadet College.
- (2) A period of four or five years' training with his unit, varied by short courses of instruction at "Small Arms" and other schools of a like nature.
- (3) A six months' course of study at a Junior Officers' School followed by three months' attachment to other arms, and, in the case of candidates for Staff employ, a further 3 months' attachment to the staff.
- (4) A further period of regimental training, varied as before by short courses of instruction. In the case of an officers who does not aspire to staff employ, this period would last till he wishes to qualify for command of a unite. The maximum duration might be as much as 15 years.

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- (5) In the case of an officer recommended for Staff employ, a minimum of a years' regimental instruction is followed by a term of employment on the staff.
- (6) After say 12—15 years' total service, a course at a Staff College for selected officers.
- (7) After promotion to major, and as a necessary qualification for command of a unit, three months' study at a senior officers' school affiliated to a Staff College, followed by three months' attachment to other arms.

The principal departures from the existing system are (A) the instruction of courses of study at Junior and Senior Officers' Schools, (B) systematic attachment to other arms, and (C) the abolition of examinations for promotion and for admission to the Staff College.

41. It is thought that the system proposed approaches more nearly to the ideal than the existing system, in that it is progressive and varied, combining the study of principles with practice in their application. It should also go further to ensure uniformity of method throughout the army, because it would make it easier for the General Staff working through the commandants of the various schools, to instil into the minds of all officers sound principles.

42. Throughout this essay the case of those officers only who enter the army through the normal channels of Woolwich and Sandhurst has been considered. For officers commissioned from the ranks the system would require slight modification in the earlier stages, e. g., a shortened Cadet College course might be introduced. But the educational attainments of these officers varies considerably, and it hardly seems advisable to attempt to lay down a system which shall be of universal application.

43. The case of Indian Officers stands in quite a different category to British officers. They are to command platoons, and therefore they must be highly trained. To produce the best result it will almost certainly be necessary to supplement

regimental instruction by the establishment of Indian Officers' schools on somewhat similar lines to the proposed Junior Officers' Schools, but the syllabus would naturally have to be materially modified. It is not proposed in this essay to attempt to make definite suggestions in this respect.

44. It is beyond the scope of this essay to attempt to estimate the financial effects of the system advocated. The establishment of Senior and Junior Officers' Schools would undoubtedly entail heavy initial and recurring expenditure, and it is to be feared that any proposed increase to the military estimates will meet with strenuous opposition both in England and India. The British nation has once again set its face against becoming a nation in arms, and decided to revert to the expedient of trusting to a relatively small force to bear the brunt of any conflict that may be forced upon us on the continent of Europe while the nation prepares for war. Surely it behoves us to see that the force is trained to as high a pitch as is humanly possible. Plain speaking is necessary to persuade the British public that to starve the army is only one degree less criminal than to starve the navy.

45. Before the war the British public had a deeprooted idea that an infantry officer requires nothing but pluck and a certain amount of common sense. The "fool of the family" was good enough for a soldier. To what extent this idea has been eradicated by the war it is impossible to say, but it is very important to take steps to prevent its again springing up and bearing evil fruit. Efficiency or the reverse spreads from the top downwards, and not upwards. Kipling was wrong when he wrote "the backbone of the army is the non-commissioned man". Efficient officers make an efficient unit, and without them no unit will ever be really efficient. Good N. C. O's may pull ignorant officers through a general's inspection, but they will not be able to retrieve their mistakes in battle. Without thorough training our officers will never be thoroughly efficient, for all their innate good qualities. We must therefore devise the best possible system of training our officers, harden our hearts and pay for it

**Gold Medal Prize Essay.****APPENDIX A.***Standard of professional education required of an Officer.*

SUBJECT.	REMARKS.
* 1. Military History.	A sufficient knowledge of the subject to ensure intelligent appreciation of the principles of strategy, tactics, organization and administration.
2. Strategy.	A sufficient knowledge to ensure intelligence appreciation of operations in which engaged.
3. Tactics.	A sufficient knowledge of the tactics of all arms, including the Royal Air Force, to ensure intelligent co-operation. A thorough knowledge of the tactics of his own arm, sufficient to ensure intelligent action in all circumstances and efficient training of his men.
4. Staff Duties.	Every officer requires a working knowledge of the principles of staff work, of the organization of the staff and of such practical details as the writing of orders and messages, sufficient to ensure intelligence co-operation and harmonious working. Officers selected for staff employ require a more detailed knowledge of the ethics of staff duties as well as of practical staff work, to ensure the maximum of efficiency combined with the minimum of fatigue and discomfort for the troops.
5. Communications.	Every officer should have a practical working knowledge of the principles on which communications are maintained, and of the powers and limitations of the various means of communication, from wireless telegraphy to the semaphore and runners. Signalling officers require a higher standard of technical training.

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SUBJECT.	REMARKS.
6. Fortification.	<p>Every officer should understand the principles of fortification, and the importance and weakness of fortresses and fortified localities from a strategic and tactical point of view. The application of those principles must be studied by officers of the staff, Royal Garrison Artillery and Royal Engineers.</p>
7. Field Engineering.	<p>A practical knowledge of the principles and practice of field engineering, sufficient to enable an officer to decide how best to strengthen a position, taking into consideration the accidents of the ground and the means at his disposal. Also the elements of road making, bridge building, demolition, etc. Pioneers and Royal Engineers require of course a more thorough technical training.</p>
8. Science of Arms.	<p>Every officer requires a thorough knowledge of the powers and methods of employment of all weapons with which his arm of the service is armed, to enable him to get the best value out of those weapons and to instruct his men in their use. In the case of complicated weapons such as the Hotchkiss and Lewis guns and grenade, it is perhaps not necessary for every officer to know the mechanism, though every squadron and company should have one officer so trained.</p>
9. Drill.	<p>A sufficient knowledge to manoeuvre his unit in all circumstances and to train his men.</p>
10. Training.	<p>Sufficient knowledge of the principles and practice of training to enable him to draw up a systematic and progressive programme, and to carry it through without wearying those under instruction.</p>
11. Equitation.	<p>Every officer must be able to ride sufficiently well to perform his duties, and in the mounted branches to train his men. Know-</p>

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SUBJECT.	REMARKS.
12. Map reading and field—sketching.	<p>ledge of horsemastership is also required in the mounted branches and in a lesser degree in the dismounted.</p> <p>Every officer must be able to read maps with facility and accuracy, and should be able to sketch sufficiently well to illustrate a report.</p>
13. Organization and Mobilization.	<p>Every officer should be acquainted with the system of organization throughout the army and the principles on which it is based, also of the system of mobilization.</p>
14. Supply.	<p>Every officer requires a working knowledge of the system of supplying a force in the field with food and munitions. Such knowledge will teach him the importance of husbanding resources and the best means of replenishment.</p>
15. Transport.	<p>Every officer should have a working knowledge of the organization of transport and of the powers and limitations of the different forms of transport, animal and mechanical, road, rail and water.</p>
16. Physical Training.	<p>Every officer should have sufficient knowledge of the principles and practice of this to enable him to appreciate its importance and to train his N. C. O's and men. It should no longer be regarded as a "Specialist" subject.</p>
17. Hygiene.	<p>A knowledge of the principles and practice of the preservation of health is necessary to enable an officer to keep his men fit and to get the best use from their physical powers. A practical knowledge of sanitation, and elementary treatment of wounds and injuries is also required.</p>
18. Administration.	<p>Every officer requires a knowledge of the system of administration throughout the army, and an intimate acquaintance with the interior economy of his unit.</p>
19. Law.	<p>Every officer requires a knowledge of the rudiments of military law and must be thoroughly <i>au fait</i> with its application to discipline in his unit.</p>

SUBJECT.	REMARKS.
20. Languages.	In the Indian Army every officer requires a practical knowledge of Urdu and should be acquainted with any dialects spoken by men of his unit. A knowledge of foreign languages is useful but hardly essential for all officers.
21. Economics.	Every officer requires a considerable knowledge of the principles and practice of economics and the keeping of accounts, for, in addition to safeguarding the interests of his men in the matter of pay, every officer should be capable of acting as mess secretary and managing the regimental institutes.

# **THE MUTINY DAY BY DAY.**

BEING

EXTRACTS FROM THE LETTERS OF

GENERAL SIR ARCHDALE WILSON, BART., G. C. B.

TO HIS WIFE.

EDITED BY COLONEL H. R. NEVILL, O.B.E.

PART II

*Before Delhi in June.*

XXXII. THE

*Camp Delhi.*

*9th June 1857.*

Today we have a little peace and comfort after our hard work yesterday. Our tents and baggage did not come up until 4 o'clock, yesterday evening, and it was nearly 5 when I got my first cup of tea, and a bathe, how I did enjoy it! The insurgents came out in the afternoon and attacked our picquets on the ridge, but were soon driven back, but it shows what determined rascals they are. Since then they have remained within their walls, firing at us occasionally with heavy guns which they serve with wonderful precision. I had a sandbag battery erected last night for an 8 inch Howitzer and an 18 Pounder which have kept down their fire very much today, and am getting another Battery made for 2, 8 inch Mortars, but I cannot see my way clearly nor know how we can conduct this business to a successful termination. In the field we can beat these wretches whenever we come upon them, but we have no means for a regular Siege, such as this strong place requires. They have sent me a small siege train but only 40 men to man them. I have 100 recruits, but they are nearly useless, knowing nothing of their duty, but I trust



## ***The Mutiny day by day.***

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in God that He will not forsake us in this strait, but by some manifestation of His divine power, will enable us to overcome these insurgents.

**NOTE:—**This day the force was strengthened by the arrival of the Guides, under Col. Henry Daly, who had marched 580 miles in 24 days: a wonderful performance for three troops of cavalry and six companies of infantry, even though the latter were assisted at times by ponies and camels.

The bombardment of the position was effected by heavy guns in the Mori Bastion. Wilson's battery near Hindu Rao's house was too distant to do more than check the fire.

The force was encamped from the first in the open ground to the west of the old cantonment, on the east side of the Najafgarh *jhil* drainage cut. North and south the camp extended roughly from the present Mill to Kingsway. The force held the Ridge from Hindu Rao's House to the Flagstaff Tower and a little beyond. The rest of the Ridge was not consolidated until reinforcements enabled a more extended line to be occupied. At the start the position was seriously threatened from the south, where lay the suburbs of Paharipur and Sabzimandi. Watch was kept over these points from Hindu Rao's House and from the old *Pizawa* or native kiln, known as the General's Mound, which stands in the middle of the present golf-course. The position was exposed on the right flank and rear at all times, and at a later date light entrenchments and emplacements for field guns were thrown up towards the canal on the south-west. The rebels had free use of the Lahore, Kabul, Ajmer, Turkoman and Delhi gates of the city, and at no time was there any investment of Delhi, the position on the Ridge merely constituting a strong point for a containing force whose presence for several months was little more than a threat.

### XXXIII.

*Camp Delhi cantonments,  
10th. June, 1857.*

We are still remaining in the same uncertainty as to what we are to do now we are here. We feel ourselves too weak to attack this strong place with the weak force of Artillery and Engineer equipment at our command, and are trusting to Providence for some exercise of His power to assist us. The insurgents came out again yesterday at 1 o'clock in great force and attacked us boldly. We had some difficulty in driving them

***The Mutiny day by day.***

back. They came out again about half past five and repeated it. These constant attacks harass our troops very much, and show the strength of the insurgents. I believe they lost a good many men yesterday, which may prevent them annoying us again.

NOTE:—The first attack was made from the Lahore Gate of the city and directed against the right of the position, near Hindu Rao's house. The Guides, within three hours of their arrival, were moved up in support and chased the rebels right back to the walls, through Sabzimandi and Kishanganj. This proved a dangerous trap, and the lesson was not learned till later, for our troops suffered much by pushing the pursuit too far, and coming within musketry range of the ramparts.

Daly and Hawes of the Guides were wounded, and Quentin Battye, commanding the Guides Cavalry, was killed.

There was in fact no policy and no plan. The faith in Providence, so genuine in the case of Wilson, was the sole resort of the higher command, which in other words trusted to luck and muddling through.

## XXXIV.

*Camp Delhi cantonments,*

*11th. June, 1857.*

Nothing has yet been definitely settled as to our operations against this place, but I hope it will be today. We have too many talkers. Last night I received your dear letter of the 7th and this morning of the 6th. those of the 4th. and 5th. still due. I cannot tell you what a pleasure and consolation it was to see your dear handwriting again. I have very little to send you in return today. I am so anxious as to the result of our operations here, that I cannot sit down to enter into details. All I can say is I am doubtful if we have the means to take Delhi, and that without the merciful assistance of the Almighty, I fear the result. I trust in Him, however, that He will not forsake the cause of His own people. I am worn and very tired otherwise quite well. Mackinnon is getting all right again and John bears up stoutly.

Excuse this short note today.

NOTE:—It is difficult to learn what was the real and considered opinion of General Wilson on the much discussed subject of the projected *coup de main*. In this letter he clearly regards the scheme as highly dangerous and doubtful. This first impression was fully warranted by the course of events; but it is equally clear that when the assault was postponed, he had worked himself up to a belief in the probability of success, and had come to an agreement with General Barnard. Otherwise he could not have expressed his disappointment so strongly. The fact appears to be that the command had under-estimated the strength of the fortress and the pertinacity and fighting power of the rebels at this stage. The situation in other parts of India was not known or realised, and the determination to make the attempt was due in part to the exhortations of the authorities in Calcutta, who were wholly ignorant of the limitations imposed on the field force, and in part to an over-sanguine expectation of the early arrival of large British reinforcements. It will be seen later that the Delhi force continued to speculate on the assistance of the Cawnpore garrison long after that contingent had been destroyed.

The complaint that there were too many talkers was more than justified. The force was sorely in need of clear judgement and decision, and this need became more and more apparent until the course of events gave Wilson the command.

On this day news arrived of the mutiny of the 60th N. I. at Rohtak. The officers were allowed to escape, and all joined the force before Delhi.

### XXXV.

*Delhi cantonments,*

*12th. June 1857*

The insurgents came out again this morning and attacked us in great force. They very nearly surprised our left picquet. They had actually got in rear of it and shot down 4 of my gunners, and all this was owing to the supineness of the officer commanding the picquet, who allowed his men to remain in cover behind the Flagstaff Battery, instead of extending them to the front and meeting the enemy, leaving my guns quite unsupported. They came out drunk with Bhang, and fought desperately attacking both our flanks and front at the same time. I am happy to say a great number of them have been knocked over. It was the General's intention to have made an attempt to blow open two gateways and attack the place to night, or rather tomorrow morning early, but whether this attack will postpone it or not I cannot say. Nearly all our troops were engaged this



## ***The Mutiny day by day.***

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been moved off, when it was discovered that through some mismanagement, our Pioneers had not been relieved as ordered, and we were consequently short of about 700 men of our storming parties. It was too late to return this as it would have been broad daylight before we could all get down to the Gates. The attack was countermanded. It is a great pity, for I have no doubt it would have succeeded. The Sikh Rules who led the advance got down within 40 yards of the walls undiscovered and found everything perfectly quiet. The enemy, however, will certainly have heard of this movement and the surprise will be harder than ever.

NOTE:—Although the postponement of the attack was deplored by Wilson, it was regarded by Field Marshal Sir Henry Somerset as a direct intervention by Providence. It is extraordinary that Sir H. Barnard should have assented to a venture, propounded by four Engineer subalterns, which involved an attempt on Delhi by means of 1200 infantry at the outside. The reason for this assent lay in the repeated pressure applied by the civil authorities who comprehended neither the weakness of the force nor the strength of the objective.

The defaulting picquet was under Brigadier Graves, and in the opinion of Malleston this officer, who knew Delhi better than anyone present with the force, deliberately disobeyed orders on the plea that he had not received them in writing. Hervey Greathed, however, attributes the failure to the obtuseness of the Brigadier, a remark which confirms the story that Graves, unable to credit a verbal order which in his opinion appeared sheer madness, remonstrated at such length and so forcibly with the General that the latter first wavered and then recalled the troops.

General Barnard himself knew that his hands were being forced. The next day he wrote to the Governor-General pointing out that his only chance was "to place all on the hazard of a die and attempt a *coup-de-main*," and that he "really saw nothing for it but a determined rush"; the counsel of a brave man, no doubt, but the counsel of despair.

A message was received from Agra announcing the appointment of Sir Henry Somerset as Commander-in-Chief in India until further orders; of Sir Patrick Grant as Commander-in-Chief in Bengal; of Major-General Reed, C. B., as temporarily in charge; and of Sir Henry Barnard to the command of the Delhi Field Force.

## **XXXVII.**

*Camp Delhi Cantonments,*

*14th. June 1857.*

We are still in the same position. These wasps came out again yesterday evening and were beaten back as usual. We lose

***The Mutiny day by day.***

morning. Our loss has not been heavy. I have heard of only one officer killed, Captain Knox 75th. and one wounded Curtis of the Rifles. No letter from you again today. We are all well.

**NOTE:**—This attack on the British position was a serious affair. A large body of rebel infantry had concealed themselves in the ravines running through the compound of Metcalfe House, between the Flagstaff Tower and the Jumna. Soon after daylight they made a vigorous attack on the picquet at the Tower, which consisted of two Horse Artillery guns and a detachment of H. M. 75th Foot under Captain E. W. J. Knox, whose unwatchfulness led to his own death. The enemy gained the summit of the Ridge, and closely invested the picquet, while one party actually descended to the west side of the Ridge and were caught by reinforcements in the old Native Infantry lines, close to the tents. When this attack had been driven off, it became necessary to give advanced protection to the main position, and a large picquet was sent to Metcalfe House. In this manner the front was extended lightly to the river, and the organisation of the Metcalfe House position soon rendered it impossible for the enemy to attack the left flank. The original position of this picquet was afterwards modified, three posts being formed in advance of Metcalfe House. One was the mound close to the Alipur Road, commanding the ravine now spanned by a stone bridge. This held 150 men, and half-way between this mound and the river were 50 men lodged in a cowshed, which was in time strongly fortified. The third was a post of 150 men in the stables of Metcalfe House, close to the river bank. The distance from the Flagstaff Tower was considerable, and at times it was impossible to effect the daily relief of these posts.

As soon as the Flagstaff Tower had been saved, other bodies of rebels attacked Hindu Rao's House, and also threatened the camp from Sabzimandi, advancing under cover of the gardens which surround that suburb. The Guides and the Gurkhas disposed of the attack on the Ridge with easy success, while the more serious threat was dealt with by Major Jacob of the 1st Fusiliers and the irregular cavalry. Here the slaughter of the enemy was great, over 100 bodies being found in a single garden, while their total loss was over 500 killed.

Wilson was offered the post of Adjutant General on this day, but he declined the appointment, feeling that the alternative choice of Neville Chamberlain was preferable as adding much needed counsel to the command.

**XXXVI.**

*Camp Delhi Cantonments,  
13th June, 1857.*

I was in great hopes that I could have sent you a line today to say that we had possession of Delhi, but, Alas, we have been disappointed. All was supposed ready, part of the force had

been moved off, when it was discovered that through some mismanagement, our Picquets had not been relieved as ordered, and we were consequently short of about 700 men of our storming parties. It was too late to rectify this, as it would have been broad daylight before we could all get down to the Gates. The attack was countermanded. It is a great pity, for I have no doubt it would have succeeded. The 60th Rifles who led the advance got down within 400 yards of the walls undiscovered and found everything perfectly quiet. The enemy, however, will certainly have heard of this movement and the surprise will be harder than ever.

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### XXXVII.

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14th. June 1857.*

We are still in the same position. These wasps came out again yesterday evening and were beaten back as usual. We lose

***The Mutiny day by day.***

men, however in these affairs, although very small in comparison with the loss we inflict. They threaten to come out again to-day, and make a desperate effort. We are preparing for them. I am very busy and can only send a short note. The weather yesterday and today has been frightfully hot, threatening rain I fear.

NOTE.—This attack was unimportant, and was made in order to give an opportunity to the Oudh mutineers, who had just arrived, of showing their prowess. They were beaten off with ease and considerable loss was inflicted on them by Major Reid, who had charge of the position at Hindu Rao's House. The garrison of that sector consisted of the Sirmoor Battalion and two companies of the 60th Rifles, two more being in reserve. Reid was afterwards reinforced by the Guides Infantry, and in this post, which involved the protection of all the heavy batteries, he remained throughout the siege.

## XXXVIII.

*Camp before Delhi,*

*15th. June 1857 11 a. m.*

Here we still remain. The attack intended last night was again postponed in consequence of some information received of an intended attack upon our camp by some insurgents from our Rear. None, however, took place, but this morning they came out in some force, first attacked a picquet, we have in Sir T. Metcalfe's house on our left front, and then attacked our right. They were soon driven back, but again came on and attacked the picquet at Metcalfe's house. This is just over, but they seem inclined to worry us out if they can do nothing else. This is a place so surrounded by gardens, walls, ravines and buildings, that they can creep up unseen and pot away almost with impunity, there is no getting at them. I hope we shall soon make some attempt to take the city, though I cannot conceal from myself that we are much too weak for what we have to do, and that the attempt will be a desperate one.

NOTE.—Wilson was at this time halting between two opinions. A Council of War was held the previous afternoon in the tent of General Reed, who was still too unwell to take any active part in the operations. The subject for discussion was the plan proposed by the Engineers and drawn up by Wilberforce Greathed.



The latter was present, as also were Wilson, Sir H. Barnard and Hervey Greathed, who already was of the opinion that after the failure of the first scheme the chance of a surprise attack had vanished. It was urged that the project involved the utilisation of almost the entire force and the consequent exposure of the camp and the vital position on the Ridge. The military authorities clearly saw that the city could not be held if entered; but Hervey Greathed urged the political view, against his personal judgment, as would appear from his letters. He had an unbounded admiration for his brother, but allowed himself to be influenced by the enthusiasm of the latter and to express opinions which he was unable to justify on calm reflection. Eventually it was agreed to defer a decision for further consideration on the following day.

XXXIX.

*Camp before Delhi,  
16th June 1857,  
11 a. m.*

Just received your dear letter of the 13th.

\* \* \*  
We still remain in the same position and you must exercise your patience for a long time yet, before you hear of any more great success. It has been decided principally at my recommendation to delay the assault till we are joined by the moveable column from Lahore. We are not strong enough at present to run our heads against the strong walls of Delhi, but the 84th Queen's are now in possession of Allyghur, and when the Insurgents hear of the large force coming down from the Punjab, I think it is impossible they will not fall out among themselves, and render all our future operations against them easy work.

You must not feel anxious at any occasional despondency I may shew in my letters. I get so knocked up that I feel both mind and body prostrated for a time, and my letters *will* partake of such feelings. I see fully the dangers and difficulties that surround us, but I have perfect faith and hope that we shall in the end surmount them all, more particularly now that delay in our operations has been determined on. The insurgents may and will worry us in this position, but I look upon it as an impregnable one, and everyday we make it stronger.

\* \* \* \*

Address me as Brig'r Comm'dt at Artillery Hd Qu'r Camp.  
P. S.

Chamberlain is appointed Adj't. Gen'l & Pat. Grant, Comr in Chief of Bengal, both good men for the crisis.

**NOTE.**—The decision to postpone an assault was reached on the afternoon of the 15th. Wilson had made up his mind definitely and his pronouncement settled the matter. Sir H. Barnard admitted in his minute that circumstances were altered by "the fact that the chief officer of artillery had represented that the means at his command were inadequate to silence the enemy's guns on the walls, so necessary before any approach could be made". He himself admitted the weight of political pressure, but declared himself ready to make the attempt if ordered. Archdale Wilson had been busy the day before in preparing a memorandum which was read aloud before the Council. He stated his reasons in full as follows:—

"Taking into consideration the large extent of the town to be attacked, 'a full mile in breadth & nearly two miles in length from the Kashmere to the 'Delhi Gate, I must own that I dread success, on entering the town, almost 'as much as failure. Our small force, two thousand bayonets, will be lost 'in such an extent of town: and the Insurgents have shown, by their 'constant and determined attacks upon our position, how well they can and 'will fight from behind cover, such as they will have in street-fighting in the 'city, when every man will be almost on a par with our Europeans. With the 'large number of heavy ordnance they have mounted on the walls (from 'thirty to forty pieces), we must expect heavy loss during the assault of the 'gateways, as their grapeshot will command the ground from seven hundred or eight hundred yards round the walls. I gave my vote for the assault 'on the arrival of our first reinforcements, solely on the political grounds set 'forth by Mr. Greathead, feeling, at the same time, that, as a military measure, it was a most desperate and unsafe one. It has, however, since struck 'me that, even from a political point of view, it would be wiser to hold our 'own position and wait for the reinforcements from Lahore, when we could 'ensure success in our attack. So long as we hold this position we keep the 'whole of the Insurgents in and around Delhi. On taking the city they will 'naturally form into large bodies, and go through the country, plundering 'in every direction. These bodies should be immediately followed up by 'movable brigades, and cut up whenever come up with. It would be impossible, with the small force we now have, to leave a sufficient force for 'the protection of Delhi, and at the same time to send out such brigades as 'will be required. It appears to me a question of the time only. The country all round, it is true, is in the hands of the Insurgents and other plunderers, 'and must remain so till we can clear the country by our brigades, Mr. Greathead 'also contemplates the probability of the Native chiefs, who are now favourable 'to us, becoming lukewarm in our cause; but what have they yet done for us? The 'Gwalior and Bhartpore forces have long ago left us to our resources; and from

"what I hear, little is to be expected from the Jeypore contingent, until they are quite satisfied of our complete success over the Insurgents."

Wilson, in fact, preferred a protracted siege to an immediate success in the form of an assault, because of the embarrassing position which would ensue from being compelled to hold the rebel capital. General Reed concurred in this view and found that there could be no question as to the propriety of waiting. His contention was perfectly sound, and he was right in insisting that success must be ensured, for that a failure might endanger the whole position in India.

Sir H. Barnard gave way, and two days later he confessed to Sir John Lawrence that the more he thought of it, the more he rejoiced in the abandonment of the chance experiment.

XL.

*Camp near Delhi,*

*18th. June, 1857.*

*Halt past 11 a. m.*

This letter of yours, Dearest, is more desponding than usual. Don't do that. Keep up your brave heart, depend upon it all will go well in the end. We had a very pretty affair with the insurgents yesterday afternoon. We found they were intrenching themselves in the village of Pahareepore which would have enfiladed our picquet at Hindoo Rao's house. Two columns were sent out to attack them, one under Tombs, the other under Reid of the Sirmour Battalion. Reid burnt all their works and Tombs drove them back into the city. The management of his column by the latter was the admiration of all. General Barnard was delighted and came over to the Mess at night and told Tombs he wished he would marry his daughter. Tombs had his usual luck, two horses shot under him and he got a slight graze in his arm from a bullet.

NOTE:—The rebels were erecting a battery, served from their strong position in Kishanganj and Trevelyanjanj, on a mound which would have subjected the ridge to an enfilading fire, and action became imperative. The works were held by mutineers of the Sappers and Miners, who offered a most determined resistance. The battery and magazine were destroyed and the village of Paharipur was burned. The defeat of the enemy was complete and their losses heavy, while those of the assailants were but trifling. Tombs, who for the fifth time had had his horse shot under him, displayed his usual gallantry. After taking the unfinished battery, he pressed on to the Idgah, driving the enemy out of a series of gardens. On emerging

## ***The Mutiny day by day.***

he found himself with some 30 men confronted by 200 of the rebel horse, who promptly charged but were dispersed by a single volley at fifty yards. He then blew open the gate of the Idgah, set fire to everything within, exploded the ammunition and captured a 9-pounder gun.

### XLI.

*Camp near Delhi,*

*19th. June 1857.*

*12 noon.*

All has been quiet last night and this morning, but the rascals have been sending some shells nearer than is pleasant to our Camp. The Nusserabad mutineers with the Jellalabad Battery are said to have come into Delhi yesterday and we are expecting a reinforcement of 3,000 men of the Bickaneer Rajah's, whether they will be any good remains to be proved. It looks very like as if the Chota Bursaut will soon be upon us. Quite well.

NOTE.—The mutineers comprised the 15th and 30th N. I., the 2nd Company 7th Battalion of Artillery and No. 6 Horse Battery, with a few men of the 1st Bombay Light Cavalry. The Jellalabad Battery was known as Abbott's, and derived its title from the defence of that city, in the Afghan war. The guns were specially decorated with a mural crown.

### XLII.

*Camp near Delhi,*

*20th. June 57. 12 noon.*

Since I wrote to you yesterday we have had very hard work. The Insurgents came out yesterday afternoon and got to our rear in large force with 6 guns. They were attacked but without method, and we made a bungling business of it, in fact were nearly beaten back, and very nearly lost some of our guns. Cavalry and guns alone were at first sent forward, and it was not without some persuasion that I got Infantry sent to support them, at first only a weak party was sent, and the Regiment which was subsequently sent did not get up till dark, could not see what was to be done, and there was great confusion. This so emboldened the enemy that they fought well, and nearly charged up

to our guns. We lost many men and some good officers among them Yule of the Lancers killed, Becher Qu. M.-Gen., Daly of the Guides wounded, Humphries 20th doing duty with the Rifles mortally wounded, Alexander 3rd N. I. killed. One of Turner's guns was knocked over, but recovered during the night. We drove them off and captured one of their guns, but no sooner were we back in camp than they came on again, we immediately moved out, but there was no one to give orders, and after sending everywhere for Gen. Barnard for orders, I was at last told to do what I thought proper, so I took the Command. A few rounds from our guns sent off their guns. I do not know where to for we never saw any more of them, and drove the few Horse and Foot we could see clean away, they evidently had no more stomach for fighting, but there is no knowing when they will come back again to annoy us. They have some 14 or 16,000 men in and about the city, and we have not more than 3,000, and instead of being able to take Delhi, we can hardly hold our own, we want reinforcements sadly; in four or five days I hope we shall get some, but we want many more to ensure success. I am dreadfully tired, having had only two hours' rest last night and not back to my tent until 11 a. m. to-day.

**NOTE.**—This attack was critical and nearly ended in disaster. The mutineers, emboldened by the advent of the Nasirabad contingent, passed through Sabzimandi, traversed the gardens, and emerged beyond the Najafgarh canal. To meet the Jalalabad Battery, Scott, Money, Tombs and Turner, each with three guns, came rapidly into action, but were unsupported. Tombs' guns were saved by Daly, who charged the enemy with a dozen men, thus creating a momentary diversion. The Lancers then joined in, but Bt. Lieut-Colonel R. A. Yule was killed, while Hope Grant lost his horse and was rescued with difficulty. The confusion at night was great, but it was no less serious in the morning until Wilson took charge. The rebels, however, had no heart left in them and the action consisted mainly in a considerable expenditure of ammunition on an imaginary foe, much trouble being caused by a general panic among the followers in the camp.

To check any further attempt from the rear, Wilson posted three guns on the General's mound, and two more 18-pounders in a battery near the canal, each post being guarded by a permanent picquet.

The officers killed, in addition to Lt. Col. Yule, were Lt. M. A. Humphrys of the 20th N. I. and Lt. Alexander attached to the 60th Rifles.

***The Mutiny day by day.***

## XLIII.

*Camp near Delhi,  
22nd June 1857. 9 a. m.*

Yesterday afternoon I received four of your letters of the 17th; 18th, two *via* Meerut, the other two *via* Kurnaul. That of the 17th. gave me great comfort. I do indeed feel that the Lord of Hosts is with us, and our present strength in trouble, and without His aid and assistance we are indeed weak and helpless, but I feel assured that He will yet put forth His strength and enable us to overcome our enemies. The Insurgents are gaining strength daily by the junction of the different Regiments that have mutinied.

Our Reinforcements come up slowly. We however, expect Brig. Johnstone's Detachment tonight or tomorrow. We are cut off from all communication from below and do not know what is doing.

NOTE.—Brigadier Johnstone had been in command at Jullundur when the outbreak occurred at that station. The Mutineers had already joined the Delhi garrison, but the movement of European troops from Jullundur and Ferozepore was very slow, and the nearest reinforcement on this date was this mixed detachment which was brought in by Major Olpherts of the Horse Artillery. Johnstone was compelled by an accident to return to Karnal, and on this date Olpherts was at Rai, 22 miles from Delhi, with 4 guns 1st European troop 1st Brigade, 2 guns 5th Native troop 1st Brigade Horse Artillery, a weak wing of the 2nd Punjab Cavalry, a company of the 75th Foot, a detachment of the 2nd Fusiliers who had been left at Ambala, and the headquarters of the 4th Sikh Infantry, about 850 men in all. Olpherts reached camp without opposition during the night, leaving his treasure and baggage under a strong guard at Alipur.

As a set-off to this accession of strength, the mutineers were joined by the 6th Light Cavalry, the 3rd, 36th, and 61st N. I. from Phillaur and Jullundur, a reinforcement which they employed on the following day.

## XLIV.

*Camp near Delhi,  
24th. June 1857 8 a. m.*

I could not write to you yesterday, Dearest. We were engaged the whole day in repelling an attack made by the Insurgents upon the right of our position, and I regret to say

with very little effect. They held the position they had taken up in the village of Pahareepore, which rakes our right flank, until sunset, when we mutually retired, we to our camp and the Insurgents to the City. As usual we had no head. The troops were sent on helter-skelter, one detachment after another with no one put in Command to whom they could look for orders, the consequence was each party got under the first cover and remained there, instead of supporting one another. How I do wish Chamberlain would join us, that we might have one head at least to keep things straight! Our General, although a kind, generous and brave fellow has no decision, but you may judge from all this what little chance we have of taking Delhi with our present Force. In fact we are more besieged than besieging. Olpherts came yesterday all safe with a small convoy, and about 900 men including a Seikh Regiment. This is a reinforcement but a very small one to our actual wants. Brig. Johnstone was upset in his Gharee and went back to Kurnaul. The Insurgents, thanks to the folly of Government, are in possession of a strong fortress, unlimited supplies of heavy ordnance and ammunition and are constantly reinforced by fresh Regiments of mutineers. Our trust must be wholly in God, who will not let the heathen triumph over us.

**NOTE:**—This expression of opinion states the case with the greatest accuracy. The direction was deplorably weak at this stage, but the evil of which Wilson complained was hardly avoidable. Sir Henry Norman, who was on the Staff himself, was fully alive to the position. "This employment of portions of troops and batteries, he wrote, instead of whole troops, batteries, or corps, was an evil which, owing to our numerical weakness and the necessarily large force always on picquet duty, was often obliged to be tolerated. In fact, from our proximity to the enemy, when an attack took place the first and more important object was always to bring up such troops as were most ready to hand, and could without danger be spared."

This was obvious enough, but it did not tend to clear direction in action, and in the course of time very great improvements were introduced, mainly at the instance of Archdale Wilson, who had long realised what was required.

The 23rd of June was the anniversary and the centenary of Plassey, but the expectation of an attack on this account, owing to a common prophecy that British rule in India was destined to last but a hundred years, was due simply to the inventive imaginations of some Englishman. Neither Hindu nor Musalman

### ***The Mutiny day by day.***

could or would have reckoned a century to the day by the English calendar, nor had they thought of the centenary, would their dates have agreed.

Wilson was somewhat pessimistic in this appraisal of the results achieved. His opinion was influenced by his anger at the ineffective way in which the troops had been handled at this outset. The enemy, reinforced by mutineers from the Punjab, had occupied Sabzimandi and Kishanganj in force, thence threatening an attack on the Mound battery, while at the same time they skirmished right up to the position on the ridge from the city front. The latter threat was removed quickly, but the small parties of the 1st and 2nd Fusiliers, ordered to drive the enemy out of Sabzimandi, were too weak to succeed and suffered heavy losses. The effects of the sun moreover added to the casualty list, and after much delay it was thought necessary to bring up every available man, including the Sikhs who had marched in 22 miles that morning.

This counter-attack under Brigadier Showers was entirely successful. He approached Sabzimandi from the ridge and from the low ground to the west, and the rebels soon withdrew, taking their guns with them. Subsequently a strong picquet of 180 men was kept in Sabzimandi, posted partly in a *Sarai* on one side, partly in a temple on the other side of the Grand Trunk Road, which was thereafter denied to the enemy. Not only was the direct threat on the rear of the camp removed, but the general position was improved, as this picquet was afterwards joined up with Hindu Rao's House by means of a continuous line of breastworks.

The losses incurred on the 23rd were serious; one officer, Lieutenant S. H. Jackson of the 2nd Fusiliers, and 38 men being killed, and three officers and 108 men being wounded. On the other hand, the enemy losses were far heavier, and the action, disappointing as it was in many ways, clearly established the superiority of moral on the part of the British force. The 60th Rifles, the Guides and the Gurkhas greatly distinguished themselves, as throughout the day they were subjected to a continuous and intense bombardment from the city and from the Sabzimandi flank.

### **XLV.**

*Camp near Delhi,  
25th June 1857, 9 a.m.*

Yesterday was a quiet day to the great comfort of everyone, for all were knocked up by the exposure of the day before. I am happy also to tell you that Chamberlain joined the Camp yesterday. He will be a host in himself, and will I trust, keep all things straight. I also got a reinforcement of 43 Artillery men for my Batteries, not enough but a good assistance. I have not seen Chamberlain yet, and do not know what his advice is, but expect he is looking about him at the state of affairs before he forms his opinion. Our next reinforcement under Brig. Hartly



cannot be here before the 27th or 28th. I do not know whether they will be waited for to commence a regular seige, or what we shall do. And now, Darling, thanks for your dear cheering letter of the 21st. which I also received yesterday. It has done me a great deal of good. I feel that the Lord has been very merciful to us to beat back these many attacks of the murderous wretches, and I fully trust in Him that He will continue His merciful protection and enable us in the end to confound His and our enemies. We hear from the City that the Insurgents lost a great many men the day before yesterday, and are much disheartened, but are determined to make one more desperate effort to carry our position. If they fail in this which I feel certain they will do, I suspect it will be their last attempt. I sent your message to John yesterday, who was then writing to you, and he is delighted with your brave spirit.

NOTE.—Wilson was not the only person in the camp to rejoice at the advent of Neville Chamberlain, who had arrived by the *dak-gari* or mail-cart on the morning of the 24th. The Adjutant-General was then responsible for most of the executive duties which now fall to the General Staff, and a Chief of the Staff was sorely needed. On the same day Colonel Keith Young, Judge Advocate General, wrote:—“We are all so glad in camp to hear of his safe arrival, and hope there will be some generalship now, for there has been little hitherto, except, perhaps on the 8th; our movements that day were planned by poor Chester. The truth is, General Barnard, though a very nice, kind-hearted, and brave old man, is no more fit for his present post than he is to be Pope of Rome; and as to General Reed, I fancy he is no better, but he very wisely abstains from interfering.”

As a matter of fact, the entire credit for the success of the operations on the 8th June was due to Wilson himself, as he expressly states.

XLVI.

*Camp near Delhi,  
26th. June, 1857. 10 a. m.*

We hear from Meerut that the Dawks through Muzuffurnuggur are again closed, the 4th Irregulars who were there having murdered their officers and bolted for Delhi. We have been expecting the Insurgents out again all the morning, but they have not made their appearance, I suspect, however, they are after

***The Mutiny day by day.***

some mischief or other. Hartley's force which we expected in tonight, we find to be still two long marches off.

NOTE.—The detachment at Muzaffarnagar consisted of 50 men of the 4th Irregular Cavalry, who murdered their adjutant, Lieutenant Smith, looted the treasury and marched off to Delhi. The district had never been under control since the outbreak at Meerut, and was now thrown into a state of utter confusion. The remainder of the 4th Cavalry, most of that unit having disappeared already, was employed at and near Karnal, but the whole regiment had completely melted away by September.

## XLVII.

*Camp near Delhi,*

*27th June 1857. 10 a. m.*

The Insurgents did not come out yesterday, but they did this morning at 5 o'clock; and have been firing at us ever since, and we at them at long shot distances. This firing is still continuing and will, I suppose, all day, with no credit to us and little or no loss to the enemy. I have come in to have my breakfast, and to write you a few lines.

Instead of being besiegers we are besieged, with a fair prospect of being starved out, for from utter recklessness or incapacity, they allowed the Baghput Bridge, over which we draw all our supplies, to be again destroyed by the enemy, not an attempt made to keep open our lines of communication. I impressed upon the General the day before yesterday and again yesterday the necessity of preserving this bridge at all risks, to preserve our convoys and supplies, but nothing was done.

The firing is getting heavy again, and I must be out to the Batteries.

NOTE. Wilson was in a thoroughly bad temper when he wrote, and with good reason. The guarding of the bridge of boats at Baghpat had been left to Captain McAndrew and the Jind troops. Both Wilson and Hervey Greathed had expressed their opinion that the protection of this vital point was inadequate in both strength and quality, but action was taken too late. Some rebels were known to be threatening the bridge and eventually General Barnard was persuaded to send out Captain Nicholson and Lieutenant Dighton Probyn with some Punjab Cavalry to look after the bridge. Unfortunately

they were too late. The rebels, who had no guns and could have been driven off with ease by resolute action, had only reached Khekra, when panic seized the Jind levies and McAndrew precipitately retired to the right bank of the Jumna, actually allowing several of the precious boats to float down the river as soon as a small convoy had crossed from the far side. McAndrew was properly superseded, a course which would have been taken sooner, had Wilson had his way.

The next day Brigadier Graves, who had not distinguished himself greatly, left for Simla on leave: the first of a long procession of the superseded.

The attack on the 27th was directed mainly against Metcalfe House and was driven off with considerable loss to the enemy and only a few casualties among the 75th, the Fusiliers and the Guides.

#### XLVIII.

*Camp near Delhi,*

*28th June 1857,*

*11 a. m.*

About 1 o'clock we drove these insurgents back again into the city, and just as we did so, down poured the rain, and continued all the afternoon flooding our Camp in great style. This put an end to any attempt on our part (even if so intended) to follow them up and try to capture 3 guns they had brought out, and we have not derived much benefit from our victory. Brig. Hartley marched into camp with his detachment this morning. It is not a very large one—4 Guns and about 300 of the 8th. Regt. Queen's. They have, however, brought us some ammunition which was much wanted. Nothing has oozed out of the General's intention, but any regular siege with the rain pouring upon us is out of the question. I have had lots of Officers joined from the Punjab and other places, and have received 100 more Artillery men, but Campbell and the 100 more recruits I sent for from Meerut, cannot, I fear, join, the communication being cut off. The bridge of boats was destroyed by Major McAndrew the same gentleman who left me in the lurch. It seems that he had heard some troops from Delhi had come out to attack him and bolted across and cut loose the boats which he did not even secure on his own side of the river but let them drift away down the river.

***The Mutiny day by day.***

NOTE — Brigadier Hartley had come in for considerable criticism for his lack of vigorous action at Jullunder; but the 8th King's, under Colonel Edward Greathed, and the artillery were a welcome reinforcement. The 8th had to leave 100 men at Jullunder, 100 at Phillaur, and 250 at Ambala. Colonel Hartley did not remain at Delhi, but returned to Ambala to assume command of the brigade. Colonel Longfield took over the command of the infantry brigade vacated by Colonel Graves.

## XLIX.

*Camp near Delhi,*

*29th. June 1857. 12. 30 p. m.*

No letter from you. In two days more we shall have received all our reinforcements, when I suppose something will be attempted, but what I can't say, regular approaches are, however, impossible. We none of us expected so long a sojourn before this place, and are not well provided. My boots are wearing out fast, shirts getting very ragged. If I ever get back to you, Dearest, you must rig me out afresh completely. I am getting very thin, and not quite so strong as when I started, but otherwise quite well. John is getting quite stout and growing a large beard.

NOTE.—The previous day was quiet, and the only event of importance was the achievement of the Engineers, who went out at night with some Sappers and a party of the 9th Lancers to cut the canal leading to the city. While this did not interfere seriously with the city, it stopped the supply of water for the flour-mills and so put the rebels to considerable inconvenience.

The force, though in the best of spirits, was rapidly becoming very ill-clothed, and their condition afforded amusement to the 8th, who turned up as clean and as smart as if on parade. The staff was particularly conspicuous for their unconventional dress, and Wilson was no exception to the rule.

## L.

*Camp near Delhi,*

*30th. June 1857.*

The Insurgents came out again this morning, but made a very poor fight of it; but these attacks are very annoying and we can gain nothing by them, as they are always concealed by walls and gardens where we cannot see them, and when they

see we are prepared for them, they run back into Delhi. We are altogether in a false position here. We want 25 or 30,000 men to take such a strong place as Delhi, with no end of guns and ammunition at the insurgents' command. If General Barnard's force had joined me at Ghazee Deen Nuggur instead of ordering me to join them, we should have held the whole Dooab, kept down all insurrections in it, as well as Moradabad, Bareilly, Oude, and other places below, and continued to draw our supplies and revenue with ease. They could have done nothing against us in the Field and we could have waited patiently for our reinforcements from Calcutta, and in the cold weather carried everything before us, if, which is most probable, the insurgents shut up in Delhi had not quarrelled among themselves, and left us little to do, but to hunt them down. Behind these walls they are impregnable or nearly so to any force we can now collect, and our being here only holds them together.

Our reinforcements 61st. wing and Coke's Regiment have not yet come up, when they do, I suppose we shall make some attempt. I am better today but still feel wearied and knocked up. The worry of mind and wear of body ever since the 10th. May begins to tell upon me, and I feel inclined to do nothing but sleep.

NOTE. These reflections were obviously due to the news that the Bareilly mutineers were close at hand. Wilson lamented the inability of the force to prevent the additions to the strength of the enemy which were pouring in from the North-Western Provinces and Oudh. The problem of an assault on the city was ever before his mind, and whenever reinforcements arrived to make the question something more than academic, a more than proportionate increase in the strength of the rebel garrison served to render the objective more remote.

Sir Henry Barnard realised his position clearly. In his letter of the 28th June to Sir John Lawrence, he stated that he could only utter his satisfaction at having maintained his position, but that the capture of Delhi was too gigantic an undertaking to be considered seriously. Consequently it is not surprising that an alternative course should be debated. The suggestion was of little value, for the force was now definitely committed; but the question of a decisive attempt on Delhi from the Ridge, even at this stage, was still to the fore.

The fighting on the 30th was on a considerable scale. The enemy was repulsed with loss, but two officers doing duty with the Sikhs were wounded and some 15 or 20 men of the Sikhs and Gurkhas were killed or wounded.

***The Mutiny day by day.***

LI.

*Camp near Delhi,**1st July 1857 12 noon.*

The Bareilly Mutineers arrived at the opposite side of the River, and are crossing as fast as they can, but on account of the rise of the River, they have to ferry half across. Coke's Regiment are expected in tomorrow.

Yesterday I had a visit from poor Miss Clifford's brother; he came to thank you through me for your kindness to the poor girl. I like what I saw of him. He told me he had written to you full particulars of her fate, but I suspect you have never received it.

**NOTE:**—Sir Henry Norman states that the Rohilhand Mutineers marched across the bridge of boats within full view of the Ridge, whereas Colonel Keith Young expressly states that the bridge was broken by the flood and that in consequence the crossing was effected by boat. The account now given states the actual fact. The rebel reinforcement was large, consisting of No. 15 Horse Battery, two 6-pounder guns from Shahjahanpur, the 8th Irregular Cavalry, and the 18th, 28th, 29th, and 68th Native Infantry. The passage was fully protected by the Salimgarh outwork and was fully 2500 yards from the nearest gun on the Ridge.

Wilson does not mention that the wing of the 61st reached the camp in the morning and marched in with the band playing "Cheer, Boys, Cheer," to the great delight of the garrison. The Regiment under Colonel William Jones had marched from Ferozepore in 16 days.

Miss Clifford was one of the victims of the Delhi massacre. She had left Gurgaon, where her brother was Assistant Collector, to stay with friends in Delhi when the outbreak took place. Her brother reached Meerut from Gurgaon and accompanied the force to Delhi, where he was killed just after the final assault.

LII.

*Camp near Delhi,**2nd. July, 1857, 10 a. m.*

I hope, with you, that the 23rd (the day of the prophecy) having passed over, will prove that our rule is not to be upset, in this country. The villains made a great attempt on that day, and kept us at it all day, and some of our men, I am sorry to say, did not behave so well as they ought to have done from

want of good leading. The Bareilly Insurgents have all got into the fort, but Coke's Regiment joined us this morning, they are equal to the whole of them. Mackenzie of ours got slightly wounded in the leg this morning in the Batteries. It is not much and will not I hope, keep him long from duty, but he is a great loss to me even for a day.

I am feeling much better. For some time I have been feeling a sense of great weariness, the reaction, I suppose, after so much worry of mind and exposure, but it is wearing off fast.

I have one very bad piece of news for you, Dearest, we heard yesterday that in the outbreak at Gwalior Hawkins and Stewart (Rose's brother-in-law) were killed. I fear there is no doubt of the truth of the report. She is said to be safe in the Fort.

\* \* \* \* \*

I have three others in my tent besides myself, Johnson, Barchard & Hamilton, pretty close stowage.

NORR:—Captain William Stewart commanded a battery of artillery at Gwalior and was killed in the outbreak on the 14th June. His wife and son were also murdered, as were Major Hawkins, commanding another battery, and several others. The infant daughter of the Stewarts was brought by the refugees into Agra.

Major Murray Mackenzie and another officer, Fagan of the artillery, were wounded slightly by the explosion of a shell.

Coke's Corps, afterwards styled the 1st Punjab Infantry, came into camp upwards of 800 strong under Major John Coke, who had raised the battalion and had gained a great name in frontier warfare.

Captain Johnson, who was on Wilson's staff from the first, afterwards became General Sir E. B. Johnson, K. C. B., C. I. E., and was for some time Adjutant-General of the Bengal Army.

### LIII.

*Camp near Delhi,  
3rd July 1857. 11 a. m.*

We expected an attack at daybreak this morning chiefly from the new troops, but they have not yet come out. Yesterday afternoon we were obliged to disarm some men of the 2nd

***The Mutiny day by day.***

Punjab Cavalry, and 9th Irregulars, who were found inciting the Seikh Regiments to turn against us; a company of the 4th Seikh Infantry were also disarmed for the same cause. This Company were not Seikhs, but enlisted in the plains. Some 4 or 5 of them—two of them Native Officers—were hung. They ought all of them to have been shot, but it is very dreadful having such wretches in our camp, to do all sorts of mischief while we are repelling attacks from Delhi. I believe our Seikhs and Goorkhas to be as true as steel, but not another Native soldier is to be trusted. We are indeed sorely beset on all sides, and with God's aid only, can we be extricated. Fagan got a crack on his skull yesterday from a piece of shell, but it did not penetrate his thick Puggree, and having an Irish skull he is none the worse for it.

11.-30 a. m. Just got yours of the 30th, glad to hear so good an account of the doggies. How I should like to see them and their mistress again! The verse from Chron. 20 is indeed a remarkable one, and very applicable to our case, and what is more remarkable I have just heard that there was a dispute and blood drawn in the City last night between the Hindoos and Mussulmans on the subject of the latter calling to Prayers. May God in His mercy and wisdom sow dissension among these murderous villains and give us an easy task to destroy them. This dispute has probably postponed the attack with which we were threatened. The weather is fearfully close and perspiry yesterday, and today quite prostrates me.

NOTE:—The attack was expected because the rebels had kept up a heavy cannonade all night on the three picquets near Metcalfe House, and Hodson, the head of the intelligence, had received news of an intended sortie.

Indications of treachery within the Camp were a constant source of anxiety. The headquarters of the 4th Cavalry under Colonel George Hall were known to be disaffected, and the retention of these men after the rest of the regiment had melted away was obviously a matter of risk in the eyes of all but their commanding officer. The 9th Irregulars, who afterwards provided a nucleus for Hodson's Horse, were of very mixed composition, and subsequent events proved that they were far from reliable.



On this occasion the trouble was started by some of the Hindustani Native Officers in Probyn's detachment, who were trying to pervert Coke's regiment. They were shown up by the latter and were promptly hanged. The 4th Sikhs too contained 150 men from Oudh, generically styled Purbiahs, and these men had been suspected for some time. After the revelation of the sedition by the Native Adjutant of Coke's regiment, some 70 Purbiahs of the Irregular Cavalry and all those of the 4th. Sikhs were disarmed and sent away.

This day Colonel Baird Smith arrived from Roorkee, having travelled 60 miles in twenty-four hours, a wasted effort, as he had been informed that an immediate assault on the city was intended and he was most anxious to be present. He had improvised a body of some 600 Pioneers, and had loaded 50 or 60 carts with tools and stores, before leaving Roorkee on the 29th June. Pushing on ahead, in spite of trying conditions, he reached Delhi to find that the projected attack had again been postponed. Barnard was most anxious to make an effort, but the task at this stage was manifestly impossible. As Wilson pointed out, the artillery was outranged and outnumbered by four to one. On the 2nd July the batteries concentrated on the Mori Bastion, and succeeded in knocking down part of the wall; but the rebel battery was in full working order the next day, whereas the British force was reduced by one 24-pounder, owing to a direct hit during the counter-bombardment. The shortage of guns was very serious. The trunnions of the howitzers were giving way one after another and Wilson was reduced to using them as mortars, buried in the ground. In this way they threw shells to a long distance, but accurate shooting was out of the question, and the employment of large pieces in this manner meant little more than a waste of precious ammunition.

LIV.

*Camp near Delhi,*

*4th. July 57 1 p. m.*

We have been making another mess of it to-day. Last night the Bareilly Force came out, got in our rear and attached a Seikh Police Corps that were stationed at Allipore to keep up our communications. The Insurgents took out 6 Field guns and an 8 Pr. and of course the Police Corps had to retire. We sent out a Force from Camp at 3 o'clock this morning, Coke's Corps, the 61st, the Guides Cavalry and 12 of our guns, they came up with the rebels, drove them back, but I am sorry to say, did not follow them properly. The rebels retreated about two miles one way, and we the same distance the other, and Coke who commanded the party sent all the guns back into camp. The

***The Mutiny day by day.***

consequence was these villains advanced again upon Coke and I have just been called upon to send out 12 more guns to his support. Instead of two troops being worked, four have now been out, knocking up men and horses, I learn that Coke had a splendid opportunity of cutting these fellows to pieces, but he did not avail himself of it. I am very sorry for this, for he is an old friend of mine, and he came down with such a high reputation, but I suspect he was hampered by the General's indecision. I hope Coke will this afternoon do something more decisive. As no dawn can go till we have driven away these scoundrels, I will keep this open to let you know the result. Coke followed the Insurgents about two miles this morning, but ought to have followed them into Delhi, I am told the Insurgents retreated coolly and regularly from not being followed quickly and decisively.

*5th July, 10-30 a. m.*

Our troops did not come back till 8'clock and after all, I am sorry to say, did nothing. The Insurgents are believed to be still on the other side of the canal on our right rear flank, from which they can command our communications to the rear. We have all been much disappointed in Coke. He was, I am told, hampered by orders from the General, but I should not have thought him the man to dread responsibility, when he saw an opportunity to strike a good blow. Our position is now worse than ever, and we have really no head to extricate us. It will give the Insurgents great confidence and we can do nothing so long as they are allowed to remain where they are.

John was floored again by the sun yesterday, and obliged to come in, but he is all right this morning.

NOTE.—The Commandant of Artillery, compelled to fight an unequal battle with inadequate and fast deteriorating weapons and all the time burning with the desire for vengeance on those whom he persistently denounced as treacherous murderers, could not forgive this failure to punish the rebel force when caught in the open. He knew by experience the complete superiority of the British troops over the mutineers under equal conditions, and his condemnation of Coke, a tried soldier who for years had been fighting a foe worthy of respect on the frontier, finds no echo in the pages of other writers.

## ***The Mutiny day by day.***

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The enemy reached Alipur and partially plundered the village and the post. The force which went out to meet them comprised a wing of H. M's 61st Foot, Coke's Corps, two troops each of the Carabineers and 9th Lancers, the Guides Cavalry, some of the 9th Irregulars, Scott's Battery and Money's Troop of Artillery. They came in sight of the Bareilly mutineers' who had been joined by the Alipur raiders, about 7 a. m. on the 4th. They were returning to Delhi along the high ground running parallel to, at a distance of about a mile from, the canal. On sighting the enemy Coke changed direction to the left and advanced for nearly two miles over swampy ground to the Painbari bridge over the canal, thence debouching on to an open plain of muddy fields. The artillery advanced, flanked by the Cavalry, with the infantry following in the second line, to attack the enemy who had taken up a position in a village. The insurgents stood their ground till the force was within 500 yards and then moved off rapidly, only a few stragglers being caught by the Carabineers and Guides. A few sepoys were found in the village, and the Alipur plunder was recovered. The force then retired, and about midday halted in the shade of the trees on the canal bank. Here Coke was attacked by a large body of mutineers which had advanced on his left flank. Seeing himself greatly outnumbered, he retired, followed by the enemy who kept up a steady fire at a range not exceeding 150 yards. The 61st bore the brunt of this attack, lining the northern bank of the canal, and the rebels were actually wading through the water, when the situation was saved by the arrival of Tombs, who crossed the bridge at the gallop with his guns, unlimbered with astonishing speed and took the rebels in flank. Taken by surprise, they made no stand but fled towards Deih, leaving some 200 dead on the ground.

The generalship had been faulty and an opportunity had undoubtedly been lost, so that Wilson had good reason to feel disappointed. The men had been out for seventeen hours, and the casualties from heat-stroke were numerous.

The detachment at Alipur belonged to the 5th Punjab Cavalry.

LV.

*Camp near Delhi.*

*5th July 57. 12 noon.*

I write a few lines to tell you that since sending my former letter to the Dawk, I have received yours of the 1st, 2nd and 3rd. You are quite wrong, Dearest, in being so angry and impatient with the Post Master's Department, all letters from camp wherever directed now go *via* Kurnaul, since the Baghput bridge was lost, we have no other road open to us.

I fear what I told you about Jane Stewart is not the case. Report says she has fallen a victim as well as her husband to

*The Mutiny day by day.*

these murderers. This even may have been a better fate than the insults the other ladies had to endure.

NOTE.—Report spoke truly on this occasion, for Mrs. Stewart was the only lady shot at Gwalior by the mutineers. The others had to find their way across country as best they could, under dreadful conditions, to Agra and other places of refuge; the only redeeming feature of their pitiful story being the kindness showed them by the Rana of Dholpur.

This letter affords further testimony to the extraordinary performances of the postal service. There were no railways, and yet letters reached Delhi from Mussoorie in two days.

## LVI.

*Camp near Delhi.*

*6th July 1857.*

*11 a. m.*

We have just come from the funeral of General Sir H. Barnard. He was seized with Cholera yesterday forenoon and died in the afternoon. Poor fellow, the responsibility and work thrown upon him was too much and mental anxiety, loss of appetite and sleep have killed him. We have lost a fine gallant gentlemanly man whom all loved. As a General his fearful indecision and want of firmness made him unfit for his position, but I doubt if we shall benefit much by his successor, General Reed having assumed the command himself, and he is more fit for an invalid couch. Chamberlain will now do all the work—It is a sad state of things in such a crisis not to have someone capable of leading and directing us properly.

We had very heavy rain again last night, which flooded our camp, and my tent. The water, however, luckily soon subsides. John is all well again and Mackenzie doing well. His wound will, however, keep him on his bed longer than we at first expected. I am feeling much better to-day.

NOTE.—Wilson analysed the case exactly, and his version is borne out by Colonel Keith Young. "The truth appears to be that the poor General has been ailing for the last ten days, but it has made no difference in his way of going on—always in a state of excitement, rushing about all day in the sun, and exposing himself in everything. It is no wonder that he has been quite unable to bear up against the attack. He is the kindest, most amiable old

man that ever was, but most utterly useless as a general, and altogether misplaced in his present position "

Sir Henry Barnard had, however, served in the Crimea with distinction, but he was gravely handicapped by his ignorance of Indian conditions, having only landed in the country in April of this year. As a man, few could have been more respected or beloved. His funeral took place the next morning, and was attended by every man who could be spared from duty.

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# **THE MUTINY DAY BY DAY,**

BEING

EXTRACTS FROM THE LETTERS OF

GENERAL SIR ARCHDALE WILSON, BART., G.C.B.,

TO HIS WIFE.

PART III.

*Before Delhi in July.*

LVII.

*Camp before Delhi,  
7th. July, 1857.*

Yesterday afternoon I received your dear letter of the 4th. When, indeed, Dearest, shall we again be together on the anniversary of that day?

You ask me if I ever proposed to the General our taking up our position in the Dooab, I did not, but I often mentioned my opinion that it would have been much better if I had been left at Ghazee Deen Nuggur, with a larger force if possible, placed at my command and from the first day we arrived here, I declared and gave in a memo that in my opinion it was hopeless our attempting to do anything with the small means at our disposal against so strong a place as this, and that only desperation would justify an assault without being able to breach it. The night Chamberlain arrived the General sent for me, and put in my hands a paper he had drawn up much to the same effect, and saying he thought our wisest course was to withdraw into the Dooab. He asked my opinion which I gave, agreeing fully with him, but urging the importance of securing the Baghput bridge. I left his tent under the impression that this was settled and would be immediately carried out, but two days afterwards the bridge was destroyed and lost to us, though I again wrote to him the next day urging the importance of it. This effectually

prevented the plan being followed out, and ever since we have been waiting here, indecisive what to do, waiting upon Providence. Garbett, Angelo and two officers of 61st. Artillery joined me yesterday afternoon.

**NOTE.**—If a retreat from the Ridge was ever contemplated, the loss of the bridge of boats was a veritable godsend. A withdrawal in the face of the overwhelming strength of the enemy could only have resulted in disaster. This letter is of unusual interest. Wilson perceived from the first that the role of the army must be that of a containing force until it was strong enough to attempt a siege. He considered that a position on the eastern side would check the inflow of reinforcements. He did not take into consideration the fact that a division of the force meant a division of strength, and further that it would have been highly dangerous to interpose Delhi between the army and its reinforcements. Neither Wilson nor Barnard realised that these reinforcements would come from the Punjab alone, and that with the help of Punjabi troops he would take Delhi. All eyes were on Calcutta. News came through with great difficulty, and even after Cawnpore had been lost and regained, the garrison on the Ridge continued to expect the arrival of Wheeler and his ill-fated force.

LVIII

*Camp before Delhi,  
8th July 1857.*

*1 p. m.*

A large force with 18 guns went out this morning at 2 o'clock very secretly, supposed to be intended to stir up the Bareilly Insurgents, who are encamped somewhere on the Rohtuck Road. No firing has yet been heard in that direction, but the Force is still out, keeping us in great suspense. They must have either found the ground too difficult to get over, or the Insurgents to have bolted back to Delhi.

Will you try if you can pick up for me at Ford's or elsewhere a waterproof great coat? The lighter the better. John I am sorry to say is gone out again with the Artillery, I hope he will not suffer again from the sun.

**NOTE.**—The object of the expedition, according to Sir Henry Norman, was the destruction of the bridge over the Najafgarh cut at Basai, about eight miles from the camp, so as to render an approach by the enemy to the rear of the camp more difficult. The column was commanded by Brigadier Longfield of

***The Mutiny day by day.***

H. M's 8th Foot, and the bridge was successfully blown up by the Sappers. The account given by Wilson is somewhat misleading, as it would appear that the force mentioned in this letter was the same as that which returned on the evening of the 9th. This, however, was not the case, the "attacking party" mentioned in the letter of the 10th July being that which followed up the raiders after their inroad into the camp.

**LIX.**

*Camp near Delhi,  
9th July 1857,  
3 p. m.*

This morning about 10 o'clock the Insurgents did a very bold and daring thing. Their Cavalry came dashing clean into the Camp, cut through two of Tombs' Guns, a picquet and into Remini's Native troop which they tried to induce to join them. We have Irregular Horse in our Camp, particularly the 9th Irregulars, who dress in the same manner as these fellows and whose fidelity has long been doubted and they were seen today joining the Insurgents in their foray. Our picquets could not tell friend from foes, and they were let come into Camp without opposition. I look upon it as Showers' fault altogether; he knew these fellows were out in force, yet because it was raining he would not order out the supports of the picquets. This was of course communicated to the Insurgents who took advantage of it. Luckily for us not much damage was done. There was great confusion of course, but they were quickly driven out, without much loss on our part. Young Hills of Tombs' Troop got a bad sword cut, his life was saved by Tombs, who killed two with his own hand, he had a cut over the head himself, but his cap saved him, it just separated the skin of his head. There has been some hard fighting also all the morning in Hindu Rao's Picquet. The result we have not yet heard, but the Insurgents appear to have been driven in.

All our Irregulars are I believe, to be disarmed, it should have been done long ago. Unfortunately all our posts of communication to the rear are held by these rascals and we are greatly at their mercy.



**NOTE.**—There is no doubt that the inroad was due to the treachery of a picquet of the 9th Irregulars. The massing of the insurgents in the suburbs on the right of the position was known, but the garrison had not been called to stations. The battery on the Mound was guarded by a troop of the Carabineers under Lieutenant Stillman, with two guns of Tombs' troop. Further to the right was a picquet of the 9th Irregulars, from which two vedettes were thrown forward some 200 yards along the Grand Trunk Road. Willson had protested repeatedly, but without result, against leaving the protection of the right to Hindustani troops. The result of such neglect was that a body of enemy cavalry rode up and fraternised with the 9th, by some of whom they were joined, and then dashed into the camp, cut down two of the Indian gunners with the section of Tombs' troop and made for the guns of the native troop of Horse Artillery which was stationed on the right of the camp, in the hope of seducing the men. The only resistance was made by Lieutenant Hills of the Artillery, who charged the enemy and sabred two of them before being ridden down, and by Lieutenant Stillman and one or two of the Carabineers. The rest of the latter, all very young and untrained soldiers, bolted precipitately, and this famous regiment was not permitted to forget the incident for some time to come.

Hearing the noise, Tombs dashed out of his tent and at 30 yards' range shot with his pistol a sowar of the 8th Irregulars who was on the point of dispatching the prostrate Hills. The latter rose and engaged one of the enemy on foot, but received a severe cut over the head and was for the second time saved by Tombs, who despatched the assailant with his sword.

Subsequently both Major Tombs and Lieutenant Hills, afterwards General Sir James Hills-Johnes, received the Victoria Cross for their gallantry.

Meanwhile the rebel raiders failed completely in their advances to the, Horse Artillery. The behaviour of these men was admirable and they actually requested Major Olpherts, who had his guns unlimbered, to fire through them at the mutineers. The latter, after seizing a few horses, retired when attacked by Captain Fagan and a few men. Some bolted to the bridge over the canal cut and others withdrew towards Sabzimandi. Out of a total of about 100 men 35 were killed, partly by Captain Fagan and his gunners, partly by men of the 75th Foot, who pursued the raiders into a grove near the cemetery. Some of the enemy had taken refuge in trees and were shot down individually.

After this momentary incident, it became necessary to deal with the mass, of rebels holding the suburbs and threatening the right of the position. An infantry brigade was organised under Brigadier W. Jones, comprising the available men of H. M.'s 8th and 61st Foot, two companies of the 60th Rifles and the 4th Sikh Infantry, about 700 bayonets. To this were added the six guns of Major Scott's Horse Battery, the whole being under the direction of Brigadier Chamberlain. The column crossed the canal at 10 a.m. and soon came in sight of the enemy. Line was formed and the action began. While in the open, the enemy retired steadily, but near Sabzimandi the advance was impeded by the difficulty of clearing the enemy out of the gardens, the rebels as usual proving stout fighters when behind cover. The numerous gardens were cleared slowly and at a considerable cost, and later a more formidable obstacle was encountered

at the Sabzimandi bazar. Here progress was arrested until Major Reid, who was in command at Hindu Rao's House, brought a heavy flanking fire to bear on the rebels, who retired towards the city. Emerging into more open ground, the task of driving back the enemy became easier, and much boldness was displayed by Major Scott, who inflicted great loss on the rebels with his guns at close range. Crossing the canal bridge, the force advanced down the lane, between the canal bank and the Kishanganj Serai, which was so strongly held that the troops were checked and began to waver. Thereupon Colonel W. Jones led a combined mass of Europeans, Sikhs and Goorkhas at the double down the lane. The rebels awaited the charge, but when the troops were within fifty yards, broke and fled. Many of them were trapped in the Serai and were killed to a man, but the main body made for the city. As they neared the walls, they were joined by reinforcements, but were again charged and driven through the gates. It was this final pursuit that brought the troops under the fire of the heavy guns mounted on the city wall, which occasioned the bulk of the casualties. Towards sunset the force returned to camp, after a severe engagement of seven hours, soaked to the skin with the drenching rain which had fallen at intervals. The loss amounted to one officer, Ensign W. H. Mountstevens of the King's, and 40 men killed; 8 officers and 163 men wounded; and 11 men missing. The damage inflicted on the enemy was computed at 500 killed and 1500 wounded, but the price of victory was heavier than any paid hitherto.

During the day a Court of Inquiry was held to consider the question of the Native Cavalry. The upshot was that the 9th Irregulars were sent away, excluding the Sikhs, who became the nucleus of Hodson's Horse. The men were not disarmed, owing to the representations of Chamberlain, who had previously commanded the regiment. With the 9th, a wing of the 17th Irregulars was sent back to the Punjab. The headquarters of the 4th, about 100 men, were disarmed, and their horses and arms were not restored till the fall of Delhi. The Native Troop of Horse Artillery similarly had its guns removed, by way of precaution, and because some of the young soldiers had deserted. The men, however, were employed throughout the siege with the mortar batteries and behaved very well, not a single old soldier deserting. In recognition of their steadfastness, the guns and horses were subsequently restored.

## LX.

*Camp near Delhi,*

*10th. July, 11 p. m.*

You will have heard long before this that Reid's intelligence to his wife of our intended attack on the City was premature. I believe that it had been determined upon and every arrangement made, but it was put off at the last moment. I heard nothing of it, but this may have been from my not being too well that day; and their not wishing to disturb me. Our at-

tacking party came back late in the evening, having driven the insurgents from all their cover clean into the City and with great loss, some estimate it at 1000 men. We have lost about 100 killed and wounded, only one Officer killed, Mountstevens of the 8th Regiment. Scott's Battery accompanied the party and I am told behaved very well; he had 8 men wounded. Chamberlain who commanded the attacking party managed it very well, so altogether the day was favourable for us, and these villains got a good lesson. It poured with rain the whole day, and we all got well ducked.

I hope your package of shoes and other things will arrive safe, but who do the shoes belong to? am I to sell them and at what price? Thank Mrs. Sewell for the socks, which I shall take care to appropriate to myself.

Baird Smith came into Camp some days ago.

NOTE- In this letter Wilson refers to the assault recommended for the 4th July. It was urged strongly by Wilberforce Greathed, who received some encouragement from Sir H. Barnard; but it is certain that the scheme was never advanced and it appears that the promoters were unwilling to consult Wilson, knowing that his calm judgment would defeat any proposal for a desperate venture. The question was determined by the arrival of the Bareilly mutineers and by the death of General Barnard.

LXI.

*Camp near Delhi,*

*11th. July 1857.*

*11 p. m.*

I received yours of the 7th yesterday.

\* \* \* \*

Rain and clouds still continue, and everything is wet, damp and disagreeable. I am, however, feeling much better today.

Our loss the day before yesterday I regret to say was much more than I stated, 220 killed and wounded was the return, more than we have ever lost in any day's action. Our consolation is, that we must have inflicted a very heavy loss on the Mutineers. They are getting desperate, and we may expect some more equally desperate attacks to that of the day before yesterday, before we can completely cow them.

***The Mutiny day by day.***

## LXII.

*Camp near Delhi,  
12th. July 1857,  
12 noon.*

I have no objection to your retailing any news I may send you as Facts, but keep my opinions on matters that occur to yourself. These we can talk over by ourselves if we are ever permitted to come together again.

\* \* \* \*

Did you remark the psalms for this morning's service? How applicable they were to us! I felt them deeply.

NOTE:—Rumours of every description were rife at this time, and many of them originated among the anxious watchers in the hills. The warning was directed more against others than against Lady Wilson, in whose discretion the General, to the benefit of the historian, reposed perfect confidence.

After their defeat on the 9th the rebels ceased to trouble the camp for some days though the cannonade continued as usual. Even this abated on the 11th, and on that day Hervey Greathed asserts that only one shot was fired from the city. Advantage was taken of this lull to strengthen the defences. The advanced post, known to history as the "Sammy House", within 600 yards of the Mori Bastion, was organised, and the earthworks connecting the Ridge with the Sabzimandi picquet were completed. The latter was a vital point, and was strengthened greatly by clearing away the trees, walls and buildings round the post, and thus securing a good field of fire.

## LXIII.

*Camp near Delhi.  
13th. July 1857 11 a. m.*

I got yours of the 9th yesterday. You will have learnt before this that Reed assumed command. It could not well have been given to me, as there are so many Senior in Camp. Poor old Reed is I fear too old and feeble for such a command, but you are wrong in supposing Barnard was a worn out man. He was an active and younger man I suspect, than I am—

The Mutineers did not come out to attack us yesterday, but this morning we have received bad news from Agra. The Plot is thickening around us. On the 6th. the Neemuch and Mhow mutineers attacked Agra. The Kotah contingent having desert-

ed us and gone over to their side, our small force it appears, went out to meet them; they had a hard day's fight, and after losing one of our guns and firing away all our ammunition were obliged to retire into the Fort, where they were safe enough. Poor D'Oyley of ours is I regret to say, killed. The cantonments burnt to the ground. We have heard of the Mutineers having reached Muttra on their way to Delhi, and the rascals will now have increased confidence, and I fear we shall have great difficulty in holding our ground here. The Lord our God will I trust strengthen us, and put forth his might to succour us, but there is no doubt we shall soon be in a great strait if we remain here doing nothing as we now are. We hear also that Sir Hugh Wheeler has had desperate hard fighting at Cawnpore and that no reinforcement has reached him from below.

The 14th at Jhelum have mutinied and after some hard fighting have been cut to pieces. The Regiments at Sealcote have also gone and have wounded Brigadier Brind. The Mutineers are making for Noorpoor and Kangra but it is hoped the moveable Column from Umritsar will intercept them. There is nothing but horrors on every side. I wish I could have sent you a more cheering letter, dearest, but I am happy to say I am much better, in fact except feeling fagged and worn, quite well.

NOTE:--Lady Wilson had suggested the obvious course, and the Brigadier knew well enough that he was the man best fitted to give a lead to the Delhi Field Force. The physical infirmity of General Reed, a man of great perspicacity of mind, clearly indicated his unfitness for command in these conditions, and the authorities had already considered the possibility of giving the charge of operations to Wilson, but were hampered in their decision by the long established rule of seniority which had no less force in India then that at the present day. It required nothing short of a catastrophe to induce the authorities to depart from the time-honoured code which had cost the lives of so many English men and women. Fortunately Sir Patrick Grant and Sir John Lawrence were big enough to realise that the situation could only be redeemed by the elimination of the unfit, and the appointment of Archdale Wilson heralded a new regime which was deeply resented by those who were passed over. Simla became the Stellenbosch of the day, and was filled with senior officers who had proved their incapacity in the plains. God-fearing, modest, sincere and eminently sane, Wilson had had no chance hitherto with the place-hunters of the hill-

## *The Mutiny day by day.*

tops. When his opportunity came, it was, as he was so ready to admit, too late. Possessing administrative ability and organising talent of a high order, he had never been given scope in his earlier years, and it was a risky experiment to bestow on a man of 54 an appointment carrying, for the first time in his career the heavy responsibility of command in a critical situation. Wilson succeeded, but the handicap of years was great and his triumph over physical weakness under which he almost succumbed, bears striking testimony to his force of character.

The events at Agra had been almost a disaster. The small British force, if better led, might have achieved a signal success; but running out of ammunition, the column was compelled to retire on the fort, abandoning the cantonments, the civil station and the city to the mob. This occurred on the 4th of July, and on the 8th the rebel troops reached Delhi. They were received as victors with a grand salute, but of this fact the British force on the Ridge was apparently ignorant.

The mutiny at Jhelum occurred on the 7th July. The condition of the 14th N. I. was well known. Sir John Lawrence had accordingly sent a force under Colonel Ellice of the 24th Foot to disarm them. The scheme outlined by the Chief Commissioner, however, was neglected, and a pitched battle lasting two days ensued, with heavy loss to the force, though eventually the mutineers were almost annihilated.

The news of this action reached Sialkot on the 8th. The station, which contained about 1000 men of the 9th Cavalry and the 46th N.I., was commanded by Brigadier Frederick Brind of the Artillery. When the outbreak occurred on the 9th, the Fort was the only place of refuge for the European population, and many failed to reach it. Brind was mortally wounded, and several others were killed. The officers of the 46th escaped on horseback to Gujranwala, subsequently joining the movable column under Nicholson, by whom the relief of the small garrison was effected.

## LXIV.

*Camp near Delhi,  
14th July 1857.*

I have no news today except that the Mutineers have come out but they do not seem inclined to attack. We are all ready and prepared for them. They had a sickener, I suspect, the last day they came out.

So you have got back to your own house at last. How are the doggies? Give Fop a beating to remind him of his master.

NOTE:—As the following letter shows, the rebels successfully concealed their intentions. The state of ignorance in the force was not confined to matters in other parts of India. The most conflicting rumours were afoot as

regards Cawnpore, where Wheeler had capitulated more than a fortnight before. The massacre at the Bibigarh occurred on the 15th July, a day before the capture of Cawnpore by Havelock.

LXV.

*Camp near Delhi,  
15th. July 1857.*

Very soon after I had closed my letter yesterday, the insurgents commenced their attack upon us. For a long time the usual potting from a distance behind walls went on, at last they got bolder, and attacked our batteries, they were driven back into Delhi, but unfortunately in the eagerness of pursuit, our men followed them too close to the walls, and were exposed to a murderous fire of grape from their big guns, and we lost many men and officers killed and wounded: if it had not been for this our loss would have been very small. Unfortunately Chamberlain got severely wounded in the shoulder and his services are lost to us for a time. He ought never to have been there at all. Young Thompson of ours was badly wounded in the leg and Roberts had a narrow escape, a musket ball hit him in the back, but first went through his pistolcap pocket which deadened the shot, and he escaped with a severe contusion. We were hard pressed at one time, but as usual the business was badly managed or we might have boned some of their guns. Poor Reed our Commander was knocked up as was to be expected. He is very ill and will, I believe, be sent away immediately. Who is to take his place, I do not know, but we are very hard up for a head.

The Tindal and Jampaunies have just come in with no end of parcels for me to distribute about the Camp, besides the two parcels for me and one for John. I don't know what I shall do with all the shirts and boots, the latter are cruelly hard things, but I dare say I shall get rid of them. Both the Tindal and Ford's Chuprassies have come in with fever, and it will be some time before they can take round their master's goods, or either can return. I cannot get any of the shoes to fit me. Johnson

has taken one pair and Hamilton another, and John will, I suppose, take one if he can get any to fit.

**NOTE:**—On this occasion the rebels made a determined attack on Hindu Rao's House, their objective being the destruction of the batteries. Colonel Becher had obtained news of this design and Reid was fully prepared for the twentieth attempt on his stronghold. The onslaught was stayed without difficulty, and Chamberlain organised a column to attack the enemy in flank. About 3 p. m. Brigadier Showers moved into the Sabzimandi with a force comprising detachments of the 1st Fusiliers, the 75th, Coke's Corps, Hodson's Horse and six Horse Artillery guns under Turner and Money. After stubborn fighting the enemy retired, and being taken in flank and rear suffered heavily. The very extent of their success made it impossible to restrain the troops, who followed the retreating rebels to within a short distance of the walls. The enemy's loss was estimated at a thousand, but the force had 17 men killed or missing, 16 officers and 177 men wounded: a price which was needlessly high and definitely stopped all talk of an immediate assault.

Neville Chamberlain had his arm broken below the shoulder by a musket ball. The other officers wounded were all Lieutenants, including Frederick Sleigh Roberts, who for the first time comes to notice in these letters, and was then officiating as D. A. Q. M. G. Second Lieut. P. Thompson of the Horse Artillery was shot through the thigh.

## LXVI.

*Camp near Delhi.*

*16th July 1857.*

You have evidently not been taking proper care of yourself to catch cold, sore throat and headache, you want me to make you be more careful of yourself. Yesterday was a quiet day, but I hear they threaten another attack today. We won't make the same mistake again as we did the other day. I have got rid of all the things you sent except two pair of shoes, which are gone to the Doctor for trial. He did not want the flannel shirts so I gave his two to Johnson, two to John, and the other two I have kept, also the warm socks, and half a dozen of the coloured shirts. That cormorant John has boned the other half dozen. I gave Johnson the cotton socks. The men who were sick are better this morning for the medicine I gave them, but not fit for any work yet. I write daily and cannot make out why you do not get my letters. Do you



ever examine the cover and look if it has been tampered with? I believe we have a great set of scoundrels in the Post Office who deserve to be hanged and shall be if they can be found out.

NOTE:—The complaints against the Post Office proved unfounded. Hardly a letter was lost, and the expectation that normal timings would be maintained in such a disturbed condition of the country appears somewhat unreasonable after the lapse of years.

The ladies in the hills were already busy with the collection and preparation of comforts for the troops, and the work increased as time went on.

LXVII.

*Camp near Delhi,  
17th July 1857 8 a. m.*

I dare say you will have heard an inkling of the news I have to tell you. In yesterday's Orders I was appointed to command this Force with the rank of Brigadier General. Oh! Ellen dear, this is a fearful responsibility that has been thrown on my shoulders, and knowing as I do my own weakness and incapacity, I feel as if I should faint under the burden, but the Lord God in whom I put my trust will surely give me strength and support and I pray that I may so execute the work to which I am called that my doings may redound to His glory. I know, Dearest, that I shall have your constant prayers for His gracious care and support, and surely they will be heard.

I received your dear letter of the 13th yesterday. I wish I had time to answer your questions fully, regarding the operations here, but I can tell you Baird Smith altered no Batteries since he came, but has confined himself solely to strengthening our position. We are indeed more besieged than besiegers. Every Gun we have is required to be employed to protect that, and if we were to make advanced Batteries to batter the walls so large a portion of our small force and Guns would be required to be employed that our position would be immediately taken by the enemy. We should lose our Camp Park and supplies and be overwhelmed at once. This is the true facts of the case. I wish I could give it you more in detail. We have only 2000

## ***The Mutiny day by day.***

Europeans and 1500 Native Bayonets. 'The enemy's force I don't know, but they get constant reinforcements while we get none. If we had had this force when we first came before the place an attack might have been made with every prospect of success, but now it would be an act of desperation only.

NOTE:—General Reed had been completely knocked up owing to his exposure in the rain for long hours on the 14th, and on the 16th he was compelled to leave for Simla. The appointment of Archdale Wilson to the command was well received except by his seniors. Colonel Congreve went off at once to Simla and so did Colonel Curzon. Another superseded officer was Colonel Longfield, who honestly enough confessed that he had no desire for the responsibility of the command. To quote Colonel Keith Young:—"It is the wisest selection that could be made, and it is thought that the new Commander will get on very well, better than he has done as Commander of the Artillery here, his plans not having succeeded very well; but as Commander of the whole Force it is generally believed that he will do the thing much better." Hervey Greathed states that "Wilson's appointment is a subject of general congratulation."

The new General at any rate was regarded as a safe man. He was so eminently sane that he inspired the confidence which was required. His record was good, if not particularly brilliant, and the Force was content to serve under a man who could be trusted to do nothing rash and to keep a clear head in difficulties.

His appreciation of his position at the time of taking over the command is a valuable contribution to history. The facts are stated clearly and not a word has been challenged by expert opinion in the light of the results. Public feeling at the time was inclined to chafe at inaction, but the situation was not realised, and it was not till years had passed that the extraordinary difficulties of a force believed to be conducting a siege, if not an investment, were fully understood.

## LXVIII.

*Camp near Delhi,*

*18th. July 1857, 6 p. m.*

Just a line to say I have been out all day from 8 a. m. to the present moment fighting the insurgents who came out in great force. We have beaten them in and as far as I have learnt, with little loss on our side. I am all right, but very tired.

NOTE:—Unfortunately Wilson gives no account of an action which was of great importance. The Jhansi mutineers had arrived to swell the rebel forces, and were detailed at once to oust the British from their position.

The plan adopted was to threaten the lines of communication by an attack on the convoy known to be at Alipur, and then to assail the position from the flank after a diversion of the British force had been effected. Actually the plan miscarried, in that the attempt on Alipur never materialised. A prolonged attack, however, was made on the right of the position from the Sabzimandi. About 1 p. m. a column was organised under Colonel Jones of the 60th, who took out portions of the 8th, 61st, and 75th foot, the Sikh Infantry, Guides Cavalry and four Horse Artillery Guns. Jones performed his task admirably, insisting on the maintenance of a regular formation instead of the "go as you please" method of earlier expeditions. The enemy experienced heavy loss from the guns, which secured some excellent targets, and when they had been driven back on the city walls, the force was withdrawn in perfect order, without a sign of straggling. This little expedition raised Jones still higher in the opinion of Wilson, who to the end regarded him as the most dependable of all his officers of the British Service.

The result of this action was the definite relief of the Sabzimandi flank. The rebels found that the extension of the defences was too far advanced to warrant any further attempt in this direction. The work already begun was almost complete, and thereafter no serious assault was made on the right of the position.

The loss amounted to two officers, Lieut. W. Crozier of the 75th Foot, and Lieut. E. Jones of the Engineers, killed or died of wounds, 14 men killed or missing, and two officers and 66 men wounded.

The force was reinforced on this date by the arrival of a strong party of Sikh Cavalry.

## LXIX.

### *Camp near Delhi.*

*19th July 1857 11 a. m.*

I received no letter from you yesterday, but the Waterproof cloak came safely to hand by Dawk Bhangy. Give Trench my best thanks for letting me have his cloak, it will be a great comfort to me. I have not yet seen the return of our loss yesterday but in killed, I believe, not beyond 10, in killed and wounded, I hope not more than 40. We received a letter from Sir H. Laurence yesterday, which states that he has great difficulty in holding his own at Lucknow, and the Cawnpore Force has been annihilated or nearly so. It appears Sir Hugh Wheeler made terms with the Rebels to retire to Allahabad. The Rebels did not keep their terms, but when our party embarked in their boats fired upon them, and I fear killed the

***The Mutiny day by day.***

greater portion. No help can therefore come to us for a long time from below. I have written to Sir J. Laurence that he must send some reinforcements from the Punjab, if I am to hold this position. The Insurgents are out again today, but not in force. They seem determined to give us no rest. I am very tired and weary after yesterday's work, and would give much for a quiet day.

NOTE:—The letter to Sir John Lawrence—again Archdale Wilson plays havoc with surnames—was written in French and contained these words:—

“ Je retiendrai cette position jusqu'à la fin. Car il est de la plus grande importance que l'ennemi soit empêché de quitter Delhi pour ravager le pays. Pour faire ceci il est absolument nécessaire que je sois renforcé de la plus grande force aussi vite qu'il est possible. J'entends que ce renforcement ne peut venir du sud, et en conséquence je prie que vous m'envoyiez du Punjaub un Régiment Anglais complet et deux de Sikhs ou Punjaubis. Si je ne suis pas bien vite renforcé j'll serai forcé de retirer à Karnal. Les conséquences de ce mouvement seraient désastreuses.”

The threat contained in the last part of this extract was idle, and none knew it better than Wilson. “What might have been his resolution, if left to his own unaided counsels, History can never declare.” Thus Mangleson, but we now have the thoughts of Wilson himself before us. He had considered the question of retirement long before, and he had the destruction of the Baghat bridge to thank for making the real issue plain. Difficult as his position was the more difficult because of the disappointment experienced by the whole Force when the reality of the Cawnpore tragedy became clear and the speculations as to the arrival of reinforcements from below were rendered futile, the position and the probabilities were visualised and discussed, but there was no wavering. The general moral of the Force was beyond all praise, and for this due credit must be given to the command. Barnard had inclined to give ear to the wild recommendations of the hotheads, Wilberforce Greathed and others; but Wilson knew in his heart the nature of the undertaking committed to him as the upholder of British rule, and though he had to listen and to argue, he was sure in his conviction. Doubtless he gained confidence from the sag advice of Baird Smith, who urged the cause of sanity with all the strength and force at his command. It is untrue, however, to say that Wilson listened and was convinced, as Mangleson would have it. In reality Wilson was already convinced, and was thankful for support. When Baird Smith, now in complete agreement with his Chief, pointed out the need of heavier metal, Wilson again received an opinion which was already his own. An

estimate of their requirements was framed, and thereafter the Gunner and the Sapper prepared their plan of action with the sole idea of battering down the defences which gave the rebels their courage and at the same time pinned them to a position in which the general situation demanded that for the time they should be held.

LXX.

*Camp near Delhi,*

*20th July, 1857.*

The attack of the Insurgents of yesterday was not intended to be a serious one, merely to harass us. They are out again today, I fancy for the same purpose. Yesterday evening I got your dear letters of the 15th. and 16th. In answer to your question about two of Scott's guns, I reply "yes," they were taken in a narrow road in the Subzee Muundee, where they could not work or be supported by Infantry. A party of the enemy rushed round the corner of a wall, drove back the Gunners and had possession of the guns for a short time, they were retaken by a party of the Rifles, I believe, under Captain Wilton. The guns were under the command of a Sergeant. There was no officer with them, if there had been he would never have allowed them to be taken into such a dangerous place. On the morning the Picquet was surprised Major Tombs' men never deserted their Guns. One waggon went off to the rear and no wonder—the Carabineers who supported them fled and left the guns to themselves. Young Hills in the most gallant manner charged the enemy's Horse singly in hopes of giving his guns time to come round, but the enemy were through them in a moment, three men were wounded, and if the enemy had stopped they might have cut up every Gunner, luckily they went straight to Remini's Troop, whom it was their object to gain over to their own side, to turn their guns upon the Camp.

As regards the property in our house at Meerut, I fear it must take its chance. I removed all your trunks into the Dum Dammah before I left, but the furniture I left there.

### ***The Mutiny day by day.***

I have not heard that it is intended to abandon the station—but it is not improbable, it may be so; anything you particularly wish for you may write to have sent up. I fear however, carriage will not be procurable. The Tindal and Jampaunies went back yesterday, I gave them 6 Rupees for their expenses on the road. Ford's man also went back with all his boots not having sold a single pair, they were not the kind wanted here, being thin soled and Wellington, it has been a bad spec.

**NOTE:**—Lady Wilson was as interested in the doings of the Artillery as her husband. The account confirms earlier records and adds little of interest.

The attack on this day proved abortive, to the relief of all, as the weather was extremely hot. In the afternoon, however, a reconnaissance under Lieut. Colonel Seaton, C. B., 35th N. I. with four Horse Artillery guns, a troop of Guides Cavalry, 150 of the 75th Foot, 400 of the 1st Fusiliers and 200 Guides Infantry, was undertaken in consequence of a report that the enemy had begun to construct a battery in the gardens to the right of the position which would have threatened the camp. The report proved baseless, but on retiring the column was attacked by a body of rebels who had been ensconced in the suburb of Trevelyananj. The rear guard, composed of the Guides Infantry, turned about and charged, to the utter discomfiture of the enemy, who gave no further trouble. The casualties this day included one man killed and eleven wounded; but of three officers wounded two died shortly afterwards. These were Lieut. T. E. Dickens of the Artillery and Captain T. M. Greensill, 24th Foot. The latter was acting as Assistant Field Engineer and was shot by a sentry under a misapprehension while examining the ground in front of Metcalfe House. This lamentable occurrence happened after dark on the 20th.

### **LXXI.**

*Camp before Delhi,  
21st. July 1857 11 a. m.*

Yesterday's attack was much the same as that of the day before—a worrying one. The fellows get behind walls at a long distance and keep up a constant fire on our Picquets. I had to send a party out to drive them out of their cover, which was done, I am happy to say, without the loss of a man on our side. They are a most cowardly race of Pariahs. If we advance on them they bolt, when we retire they follow us keeping at a respectable

distance, but there is such perfect cover for them all round our position we can never get fairly at them. These daily attacks however, are very annoying and will in time knock us all up. I was in hopes we were going to have a quiet day today, but I have just received a report they are coming out again.

**NOTE:**—If Wilson refers to the reconnaissance of the 20th, he had not seen the casualty list. Trench warfare and sniping irritated him greatly, perhaps unduly, but in view of past experience it was necessary to be prepared for a serious development of any demonstration however trifling. Already the change in the command was making itself felt. To quote Colonel Keith "Young:—"Matters go much more quickly and smoothly in camp now that "Brigadier Wilson is commanding. He is a gentlemanly, quiet, steady "old "fellow" looks to everything himself, and gives clear and distinct orders, and "all feel much more at their ease than they did under their late commander "in whom no one had confidence. He (Brigadier Wilson) is rather over-careful, perhaps, but this is a fault quite on the right side; though our troops "don't like turning out so often when perhaps it may not have been actually "necessary".

LXXII.

*Camp before Delhi,  
22nd. July 1857  
11 a. m.,*

Received yours of the 18th yesterday. Thanks for the account of the Doggies. As for looks, if any, neither of us will have much to boast of, if God grants that we meet again. Care and anxiety are fast ageing me into an old man. I do so long for a little rest and quiet with my own loving wife. May our gracious Lord in His mercy grant this boon to both of us!

Yesterday was a quiet day. The Insurgents came out, but not in great strength and did not attack us. Today for the present is also quiet. We hear news that a force of 4000 Europeans has passed Cawnpore on their way up on the 20th. Ult. and we have two Regiments Kumaon and Punjaubee on their way from the Punjaub; more are promised. If this is all true, we shall soon be able to destroy these Rebels. I have no news to send you today beyond this. I continue well but very thin.

**NOTE:**—The rumour of help from Cawnpore was due to the optimism of a native newswriter. Such rumours were only too prevalent. Cawnpore had been reoccupied on the 17th July, but Havelock had other work in hand than the reinforcement of the hard-pressed but cheerful force in front of Delhi. A week later Cawnpore itself was besieged.

The reinforcements which were at hand were those promised by Sir John Lawrence, about 900 Europeans, the Kumaon Battalion and Green's regiment of Sikhs, the 2nd. Punjab Infantry. The two last were already at Umballa, but the Kumaonis were the first to arrive.

## LXXIII.

*Camp near Delhi,*

*23rd. July, 3. 30 p. m.*

The Pandies came out again this morning at 7 a. m. and attacked our left and right at the sametime. They brought out several light guns and so annoyed our left, I was obliged to send out a party to beat them back, and try to capture some of their guns. In the latter we were not successful though very near doing so. We beat them back, however from the left into the Cashmere Gate, but they are still attacking Reid's position. He is however very strong and can well hold his own. I am sorry to say one officer was killed in our left attack—Law of the 10th. N. I. and a large number of officers wounded. Colonel Seaton and Drought, neither of whom ought to have been there, Money badly in the knee, Turner and Bunny slightly, none of these ought to have been out. I do not go out in command of the attacks myself, they are generally entrusted to the Brigr. or Field Officer in waiting. Brigr Showers was in command today. I was only looking on and directing supports when necessary. As Brigadier of Artillery I generally took up a central position where I could be easily found and give my orders, as commanding the Force I do the same. Here is an answer to your question, Dearest.

I can write no more today, but God bless and protect you.

**NOTE:**—The attack was made by a large force which emerged from the Cashmere Gate and occupied the ruined building known as Ludlow Castle. Thither the enemy brought up some field guns, which were directed partly at the Metcalfe House picquet, but mainly at the Mosque picquet on the Ridge. The latter replied with its two guns, and with two more which were brought up in



support, while the battery at Hindu Rao's House gave such aid as was possible. The rebels were almost invisible and repeatedly shifted the position of their guns.

In order to put a stop to the annoyance, Showers was sent out with six Horse Artillery Guns under Major Turner, 408 men of the King's, 61st Foot and the 1st Fusiliers, 360 of Coke's Corps, and a detachment of Guides Cavalry.

Advancing under cover, the column reached the main road to the Cashmere Gate within a short distance of the enemy, who, finding themselves threatened in flank by Lt. Colonel Drought of the 60th N. I. with 250 men from Metcalfe House, fired two rounds from their guns and retreated. In the eagerness of pursuit and some confused fighting in the gardens, the column advanced too far and again suffered. The excuse was natural, as the enemy guns had a narrow escape and the bait was tempting. One officer, Captain W. G. Law, attached to Coke's corps, was killed, Lieut. Colonels Seaton and Drought were severely wounded, the other wounded officers being Captain Money, Lieut. A. Bunny who received a graze on the cheek, and Lieut. Pogson of the King's. The losses in other ranks were 12 killed and 34 wounded: most of them belonging to Coke's Corps.

#### LXXIV.

##### *Camp before Delhi,*

*24th July 1857. 10 a. m.*

I did not, Dearest, in my letter of the 16th. mention that the command was to devolve upon me, because although I had heard rumours of it, it had not been communicated officially, and I was not certain. I did not and never have wished for so responsible a post. Under the circumstances in which the force is placed little honour is I fear to be gained. Passive endurance in holding our position if possible until the reinforcements come up from below. The expectations formed of me by others, only add to my anxieties, as I know I shall disappoint so many who cannot or will not see our difficulties. We are strengthening ourselves daily, and with God's gracious aid and assistance I will, as I said before, do my best: but I have a crafty and bloody minded enemy to deal with, luckily they have not in a mass much courage or dependance upon one another. I have given over the command of the Artillery in Camp, but not of the Regiment. Garbett is now Brigadier Commanding the Artillery in Camp, and John is his Brigade Major.

***The Mutiny day by day.***

We have had news from Agra confirming the murder of Stewart, his wife and boy, but the little girl is safe in Agra. What melancholy news for John to write home to Rose!

I think we have got the rains at last. We have had heavy rain last evening, and today is very cloudy. Hamilton has been ill for some time. I suspect he will have to go away.

NOTE:—Octavius Hamilton, pension paymaster, left Delhi several days later.

The defeat inflicted on the rebels on the 23rd had a sobering effect and for a short period the force enjoyed comparative quiet. The men, after the first burst of rain, took to various games, and the officers actually held an impromptu gymkhana.

## LXXV.

*Camp before Delhi,  
25th July 1857.*

*11 a. m.*

We have had a good deal of rain yesterday and today, and the Insurgents have kept quiet. The plot however thickens round us daily. They talk now of getting in rear of us to cut off our supplies and communications, and with my weak force I shall have some difficulty in preventing it I fear. They will soon have large reinforcements by the Neemuch Mutineers joining them, and mine are very slow coming up. I hope to have the Kumaon Battalion by the 2nd or 3rd and Nicholson with part of the moveable Column will I trust join me between the 5th and 10th. If we can get them up in time I shall be all right. Nicholson will be a host in himself. I am however, wearing out fast under the anxieties of my position. May God in His mercy support me and grant us His aid and assistance for we are sore beset.

NOTE:—For some days Wilson wrote in a gloomy strain. This is not surprising, as he was sickening for an attack of dysentery, that most depressing of maladies. Situated as he was, oppressed with the disappointment consequent on the growing realisation of the fact that help from below was becoming an impossible, he required physical fitness above all things. The force as a whole was surprisingly healthy, a result for which the General was in large measure responsible, but as the rains advanced disease began to be more deadly than the

enemy. He himself was one of the first to suffer, and he was subject to continual recurrence of this dangerous complaint till after the capture of Delhi.

All the talk in camp was of the coming reinforcements. The rumour started with the assumption that Havelock had a large force which, after recovering Cawnpore, would march direct on Delhi. Speculation as to the composition of this army was rife, but none seems to have realised that this small column would shortly be beleaguered in the Residency at Lucknow.

## LXXVI.

*Camp near Delhi,*

*26th July, 1857.*

Yesterday evening I received your two dear letters of the 21st and 22nd. Thanks, Dearest, for the encouragement you give in the latter. It has been a very great comfort to me; and comfort Heaven knows I often want, for at times I feel quite faint and weary, at the prospect of affairs before me. I feel, Dearest, I am getting too old for such constant wear and tear of body and mind as I am exposed to. If Nicholson joins me I shall feel a great relief. Today has been a quiet day again. At least for the present their attention seems now fixed on trying to get in our rear, but if the rain continues they will have a difficult country to travel over, and I hope we may be able to catch them and make an example of them. I am taking all the precautions I can and have an invaluable Assistant in Baird Smith.

NOTE:—Information as to the intention of the mutineers to cut off the communications of the force was received from numerous sources. In this case the warning was timely, and though little could be done, all preparations to deal with the threat were completed.

On this day the last of the 4th Irregular Cavalry were disarmed. The reason was that a troop on outpost duty at Sonapat had deserted. The general opinion was that this should have been done long before. No Hindustani troops remained in camp except the Sappers, who had behaved consistently well.

## LXXVII.

*Camp before Delhi,*

*27th July, 1857,*

*12 noon.*

I doubt the news sent by young Forsyth from Agra is much exaggerated and that for six Regiments you should read

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three. We have authentic intelligence from Agra that the Force from Allahabad, 1600 Europeans with 9 Guns attacked the Mutineers under the Peshwa at Futtehpoore, gave him a great licking, and took from him 12 guns and 7 Lac of treasure, that they had reached Cawupore from whence they were detaching a Regiment to relieve Sir H. Lawrence at Lucknow. This is very good news, and it is barely possible 3 more Regiments may have joined them. Chamberlain is doing very well, and there is no fear of his losing his arm. I have no power to order out the Meerut Force, they are under a senior Officer to me, and take their commands from Genl. Gowan. They have not been so very supine, the Volunteers under Williams with a small party of Rifles have been doing good service and have polished off some rascally Goojurs and plunderers both at Barot and Sudhanna. We have had very heavy rain last night, which must have made the country in such a state as to make it very difficult for the Insurgents to get in my rear for some time to come. Still pouring with rain. All quiet.

**NOTE:**—On the 12th July Havelock achieved a signal success at Fatehpur, largely owing to the brilliant gunnery of Maude. On the 15th he won a more important victory at Aung, followed that afternoon by the fight at the Pandu Nadi, and a day later by the defeat of the rebels outside Cawnpore.

The reference to Meerut concerns the doings of the Volunteer Cavalry, famous as the Khaki Risala, raised by the Collector, Mr. Wallace Dunlop, and commanded by Major Williams, the Superintendent of Police. After several minor expeditions, an attempt was made on Shah Mal, the leader of the Gujars, with a force of fifty volunteers. forty men of the 60th, some armed bandsmen and two mountain guns. After many adventures their small column defeated Shah Mal and his 2000 men at Baraut and killed the marauder. Then Dunlop visited Sardhana, stormed the rebel village of Akalpura, defeated other rebels at Dhaulana, and Galaoti, thereby restoring authority in the District so effectively that he was able to lend a hand in the pacification of Muzaffarnagar.

**LXXVIII.**

*Camp before Delhi,*

*28th July 57.1 p. m.*

Only a few lines today, I am not feeling very well, a looseness

of the bowels which has been coming on for the last 2 or 3 days and which I must stop from turning into dysentery. I received yours of the 24th yesterday. My photographic books I got Hogge to remove to the Dum Dummah, I wish you had them at Mussoorie. I have not mounted Marmaduke since he came down. He is not steady enough under fire. I have lent him to Major Brind. I have been obliged to buy another horse, an Arab lent me when I left Meerut by Lieut. Shelly. He is a steady useful animal. The servants have all behaved very well. The Dhoby bolted the day after the fight at the Hindun, and I fancy was knocked over by Goojurs. Mackinnon's Dhoby does my work. We expected an attack today, but there are no signs of their coming out.

NOTE:—The illness of the General occasioned something approaching consternation in the camp. Colonel Keith Young writes:—"Brigadier Wilson "was taken unwell last night and was obliged to leave the mess, and we were "all afraid it was going to be something serious; \* \* \* \* I don't really "know what we should do if anything were to happen to the Brigadier, for there "is no man likely to assume the command in whom we have any confidence".

## LXXIX.

*Camp before Delhi,**29th July 1857. 1 p. m.*

I had a good deal of fever last night added to the symptoms of dysentery and am very weakly and good for nothing today. Our good Doctor has taken me in hand, and I have no doubt will soon put me right again, but I am prohibited from leaving the Tent, and if these villains were to come out and attack us, I should be in a great fidget. Dear John has been with me nearly all day, and has written to you. I hope I am not breaking down, but I fear 3 months of this work is telling even upon my constitution. I am getting too old, that is the fact. I received yours of the 25th yesterday, but cannot answer it, as I am only allowed to write a line.

NOTE:—Fortunately for Wilson's peace of mind, the day was quiet. The troops were far from inactive, as every available moment was utilised in improving the defences of the position on the Ridge and of safeguarding the camp on the right and rear. In their eagerness for a forward movement, they would have had

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but little heart in such work, were it not for the threat of a grand attack on the Bagra Id, and the information that the enemy had in view the obvious course of outmanœuvring the attacking force by an encircling movement, a proceeding which, under proper leadership, must have placed the British in a position of immediate danger.

LXXX.

*Camp before Delhi,  
30th. July 1857.*

I am much better today thanks to good Drs. Mackinnon and Martin. I have had no fever, a good night's rest and the dysentery is stopped. I hope by to morrow to be all well.

Anything in the shape of warm socks, Banians, Cholera belts of flannel that you ladies from Landour and Mussoorie can send down will be very useful to my poor fellows, many of whom particularly those who came down from the Hills in such a hurry are very badly off in these articles. The insurgents have been very quiet since the 23rd, and we hear they are quarrelling a good deal among themselves. We may expect however, a strong attack on the 1st (the day of the Ead) if the Hindoos and Mussulmans don't turn upon one another, which is very probable. I am still weak and not strong enough to write a long letter.

NOTE.—While Wilson did not attempt to conceal his anxiety and depression from his wife, he gave no sign of his misgivings to others. On this same date he wrote to Sir John Lawrence:—"It is my firm determination to hold my present position and to resist every attack to the last. The enemy are very numerous, and may possibly break through our intrenchments and overwhelm us. But this force will die at its post. Luckily the enemy have no head and no method, and we hear dissensions are breaking out among them. Reinforcements are coming up under Nicholson. If we can hold on till they arrive, we shall be secure. I am making every possible arrangement to secure the safe defence of the position".

As regards the reinforcements, Lawrence had written on the 22nd July that "the following troops were on their way to Delhi or would immediately march—the Kumaon Battalion, about four, hundred strong, which has passed Ludhiana and ought to be in Delhi on the 4th or 5th of August; Her Majesty's 52nd from the Moveable Column, now at Umritsur, six hundred bayonets; Mullanee horse two hundred; and a nine-pounder battery. All these troops should be at Delhi by the 15th, and in an emergency might make double marches. General Nicholson will command the force",

This was the first instalment, but Lawrence further proposed to despatch before the end of August an additional 2500 men, comprising a troop of Horse Artillery, the second wing of the 61st Foot, two companies of the King's, the 2nd and 4th Punjab Infantry, a wing of the Baluch Battalion and a detachment of the 4th Sikhs. More important than all, an adequate siege train was under preparation at Ferozepore arsenal.

Nicholson received orders to proceed to Delhi on the 24th, and the next day marched from Amritsar.

LXXXI.

*Camp before Delhi,*

*31st July 1857.*

*2 p. m.*

I am decidedly much better today though very weak and helpless so much so that although the Insurgents came out, I could not leave my tent. Their attack was a weak one, evidently intended as a blind to a large force working round our rear intending to re-establish the bridges we have blown up and annoy our communications. A very heavy downfall of rain has stopped their operations, and has made the Country so miry that neither they nor we can easily move out. I must do my best, however, to hinder them getting in our rear; if they succeed we shall be in a fix. I am sending out a moveable Column tonight to stop them, but I am very anxious for my reinforcements.

Have you received any English letters? I got the enclosed from Herbert last night. Poor fellow! he will have learnt by the next mail that we have something else to do than settling ourselves in a nice country house in England. Will you, Dearest, answer his letter for me? I received yours of the 26th. Everything around us is very gloomy and horrible, but we pray for better days to come.

NOTE:— The large enemy column marching along the high ground well to the right of the position could be clearly seen from the camp, and a force was organised under the command of Major Coke to be ready to move at once. The frontal attack on Hindu Rao's House was, as stated, a mere feint and never developed. The threat on the rear was not immediate, as the canal had to be bridged and

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on the north side the country as far as the Grand Trunk Road was almost impassable. The rebels had a definite objective in the fact that the Kumaon Battalion was at Raj, with a large convoy of ammunition and treasure. Coke marched out in the evening as far as Alipur, and the next morning the column and the convoy reached camp in drenching rain. The column was still held in readiness and so remained till the rebels returned defeated by the weather.

**LXXXII.**

*Camp before Delhi,  
1st August 1857.  
12 noon.*

I received your dear letter of the 28th last night, with the account of the doggies. I wish I could be with you and them again. Today is the great Festival of the Ead, on which we were led to expect a desperate attack upon us headed by a number of Fanatics, but it has been raining Cats and Dogs ever since Daybreak and nothing of importance has occurred yet; a few of the villains are out more for annoyance than any real attack, they may, however, come out before the day is over. I got in the Kumaon Battalion and a long convoy all safe this morning; they had a fearful march in such heavy rain as we have had all yesterday and today.

Your report from Camp of a secret despatch from Sir H. Wheeler is all Bosh, there is no doubt I fear, but that he was killed at Cawnpore. I had a telegraphic message from Sir J. Lawrence to look out for this day. I am afraid they are too numerous and too strong in Delhi to have many fears for themselves as yet. When Nicholson comes up and they hear of the Force from Cawnpore, they may begin to despond. Remington and Somerville have both reached Camp, the latter this morning. I have not seen him yet. I am sorry to say I am losing some of my best Artillery Officers, Money wounded, Olpherts very sick and will be obliged to go away, and my "Bayard-ing" Tombs is this morning laid up. The Troops at Mhow have mutinied but our reports say Holkar has not joined them, though he has some difficulty in hindering his own men joining in it. John keeps well and I think is getting fat; he has



heard from Rose by this Mail, she and the boys jolly and enjoying themselves.

NOTE:—The events of this day were of considerable importance. In honour of the Muhammadan festival a noisy demonstration was made from the city in the morning, but nothing in particular happened till the afternoon. The failure of the rebels to build a bridge over the Najafgarh cut at Basai was announced by the appearance of timber and wreckage which came floating down the swollen channel past the camp. The expeditionary force, estimated at 10,000 men, thereupon returned towards Delhi and at Kishanganj were joined by another large body of rebels. This combined mass about 5 p. m. made a determined assault on the right of the Ridge position, and maintained the attack for nearly 24 hours. This effort failed completely and served more than any previous experience to increase the confidence of the defenders. An incessant cannonade was kept up and from time to time rushes were made by large masses; but in every case they were repelled with ease and the slaughter of the rebels was immense. The light mortars too did great execution among the bodies of the enemy while forming for the attack on the low ground; but it was not till 10 a. m. on the 2nd that any diminution of effort became apparent, although desultory rushes continued till 4 p. m.

The casualties during this protracted engagement were very small. One officer, Lieut R. J. Travers, 2nd-in-command of the 1st Punjab Infantry, and 9 men were killed, and 36 men were wounded, mainly in Coke's Corps. Wilson wisely forbade any attempt to follow up the enemy during the attack, and confined the force rigidly to the trenches. The value of this direction was appreciated by all. Captain Griffiths in his "Narrative of the siege of Delhi" remarks:—

"The fruits of General Wilson's accession to the command of the army, and the stringent orders issued by him for the maintenance of order and discipline both in camp and on picket became more and more apparent every day. All duties were now regulated and carried out with the utmost precision; each regiment knew its allotted place in case of a sortie, and the officers on picket had to furnish reports during their turn of duty, thereby making them more attentive to the discipline and care of their men. In the matter of uniform, also, a great and desirable change was made. Many corps had become quite regardless of appearance, entirely discarding all pretensions to uniformity, and adopting the most nondescript dress. One in particular, a most gallant regiment of Europeans which had served almost from the beginning of the siege was known by the sobriquet of the "Dirty Shirts", from their habit of fighting in their shirts with the sleeves turned up, without jacket or coat, and their nether extremities clad in soiled blue dungaree trousers".

"The army in general wore a cotton dress dyed with *Khaki rang*, or dust colour, which at a distance could with difficulty be seen, and was far

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preferable to white or to the scarlet of the British uniform. The enemy, on the contrary, appeared entirely in white, having soon discarded the dress of their former masters; and it was a pretty sight to see them turning out of the gates on the occasion of a sortie, their arms glittering, pennons flying and their whole appearance presenting a gay contrast to the dull, dingy dress of their foes".

Dissensions among the rebels had begun. In order to placate the Hindus, Bahadur Shah had forbidden the sacrifice of kine on the Id, and actually forebore to visit the Jami Masjid in state on the festival, discarding a tradition which had been observed from the days of Shahjahan.

Remington and Somerville were officers of the Bengal Artillery, the former, a Captain, afterwards gaining distinction as commander of the Sammy House battery during the actual siege.

Major Tombs was laid up for some time as the result of a severe chill, occasioned by sleeping on damp ground.

**LXXXIII.**

*Camp before Delhi,  
2nd. August 1857.*

*2. p. m.*

The rain has providentially carried away the bridge the Insurgents were making over Nuguffhur Jheel and made the country so swampy that they cannot move to our Rear. This has caused me great relief. They attacked us yesterday afternoon about half past five in very large Force and desperately, shouting and urging one another on. The attacks was chiefly upon Reid's position, they came on several times close up and under fire of our grape. A great number were killed and wounded. They continued the attack all night and this morning were relieved by another party from the city who have kept up a desultory but worrying attack ever since. They are trying to weary us out now I believe by a continual attack which their numbers allow them to effect. We have lost very few, about 15 killed and wounded, I believe. One Officer I am sorry to say, Travers of Coke's Corps killed. They are very quiet just now and I hope it is coming on to rain which will drive them in and give us our rest. Scott had a very narrow escape yesterday. He had gone on the ridge and had dismounted, holding his horse, when a shell lit and burst close to him. His

horse broke away, and I at first thought he had been struck. but was glad to see him walking about unhurt. I am or ought to be quite well, but I cannot pick up my strength and feel my head not so clear as usual.

NOTE:—This protracted action when it eventually ceased brought rest to the force for some little time. The moral effect on the rebels was considerable, and numbers of the sepoys from Oudh hearing of the advance of Havelock on Lucknow began to petition for leave to their homes.

LXXXIV.

*Camp before Delhi,*

*3rd August 1857*

*(my birth day).*

What would I not give to be able to pass this day with you? With your loving arms around my neck, and your eyes looking into mine, while you wish me many happy returns of the day! Shall we ever, Dearest, be permitted to pass this anniversary again together? God grant it. Last night I received your letter of the 29th, and this morning your dear encouraging letter of the 30th. I was so glad to receive it on this day. It did me good. I feel indeed that I have much to be thankful to the Almighty for. He has confounded the devices of the enemy, for by hindering them by His powers from getting into my rear and harassing me. He has enabled me by His gracious aid and support to beat back their attacks and to discomfort them. May He in His infinite mercy continue to me His gracious aid and protection.

The enemy retired into the city yesterday afternoon utterly discomforted, and I do not think they will attempt much against us for a long time. They are getting hard up for ammunition, particularly for powder and caps. The former they cannot make this wet weather, and the latter is quite beyond them. I am glad to see Swinley writes in such good spirits, but I think he will change his mind about bringing Sally and the children out, when he hears the state of things in India. Major Williams' report of 6 European Regiments having arrived at Agra cannot be true,

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I wish it were, but neither Mr. Colvin nor any one else has received any official report from the Force. All we know is from Native rumour which is vague and unsatisfactory. Two days ago I received a message from Agra, they knew nothing for certain. My reinforcements have been delayed at Loodeanah by the heavy rain, but I learn from today's Dawk they moved forward on the 2nd. (yesterday) I cannot expect them here before the 15th I fear.

Oh that I could pop in upon you even for one little hour! . Am I, Dearest, ever to have such bliss again? Darling mine, is a question I often put to myself. If God does grant it what a deal we shall have to talk over! A small cottage, 600 a year, with peace and quietness would be Heaven, and now the utmost of my ambition.

—o—

"And there was taken up of fragments that remained to them twelve baskets" (St. Luke IX. 17)

"And they did all eat and were filled; and they took up of the broken *meat* that was left seven baskets full" (St. Matthew XV 37)

## ***ECONOMY TO BE EFFECTED IN THE DISPOSAL OF ANIMALS WASTED BY WAR.***

MAJOR-GENERAL SIR JOHN MOORE K. C. M.G., C. B.,  
*Director of Veterinary Services in India.*

When a War costs from £ 5,000,000 to £ 6,000,000 per day, is continued for months and years, and income tax is subjected to continual rise, peoples thoughts are naturally driven to measures of economy.

War in all its aspects must necessarily mean extensive provision of material, and such provision must bear a considerable margin over demand and ordinary expenditure to admit of unusual or unforeseen wastage.

On the other hand a plethora of any thing may lead to wanton waste.

In any case, whether expenditure in War material is ordinary or extra-ordinary, there are fragments which remain to be picked up and turned to credit account. In previous articles I have remarked on business propositions of the Army, and Economy, well directed, is certainly one of them. It is remarkable, and I think greatly to the credit of our Armies in the various theatres of the late Great War, what astounding results have been achieved by Salvage, under an organization which was simple during the progress of the war, and which at the end was most efficient in the methods of clearing up. Salvage, both during the war and after the conclusion of hostilities, represented one of the biggest firms of commercial exploitation that has ever existed, for all Services, units, and men belonged to it, and it was headed by a Controller. "What have you salvaged to-day asked the tail board of the motor wagon, and so forcibly and expertly was Salvage and Economy brought home to one and all, that "Baskets" manifold in design and degree of capacity, were filled to overflowing. I am sure that

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the firm has every reason to be proud of its turn-over, and of its gross and nett profits.

One of the items of Salvage, and of very considerable dimensions on demobilization, related to the disposal of animals, and it is to that portion of disposal which is specially referable to the wastage or unfitness of animals occasioned by the hard usages of war, that I wish to devote the present article.

I regret exceedingly, and I am sure it is a matter of pain to many of those who have the interests of animals at heart, that those creatures who in dumb obedience shared the dangers and hardships of campaign with human beings, should suffer the indignity of classification under Salvage; still it must be remembered that they are also creatures of mart, to be bought and sold, and they represent a considerable factor in a country's commercial enterprise. It may be taken however, that their inclusion in Salvage only related to returns. Their actual disposal was a thing of itself, very carefully considered and quite rightly so, and I am in a position to affirm that the humane thought and fellow feeling reigned supreme in their disposal, even though the best economic consideration were necessary.

In war where ineffective animals are sent to Field Veterinary units for evacuation to Veterinary Hospitals and Convalescent Horse Depots, it will be readily understood that the bulk of animals which are of no further use for military purposes or the success of whose treatment is only problematical or economically unsound, will be found in these Institutions. Veterinary Service therefore becomes the chief medium through which the account or military career of an animal is closed and disposal effected.

It will also be realized that the longer the war the greater the wear and tear and the greater the number of unserviceable animals for casting and disposal.

All animals wasted by war must be accounted for, not only in respect to numbers, but as to money realized in their disposal, and although this to the uninitiated may sound an impossible or hopeless undertaking, with proper and efficient organization it becomes a comparatively simple routine process.

This at all events was so in the British Expeditionary Force, France, and as disposal in that Force reached a magnitude which probably will never again be experienced, and as exceptional facilities existed, the procedure there followed may be taken as an example not only of the manner in which disposal is effected but as to the profits and the Economy which can be made applicable to it.

In describing the process I shall endeavour as faithfully as I can to depict the history of animals after their being considered "unfit for further military Service", which is the official phrase, and will group my remarks under the undermentioned headings. I only ask that readers will not mark down Veterinary Service and myself as butchers instead of a community of experts whose mission it is to cure and not to kill. I can safely say that the act of destruction is distasteful to the Veterinary Officer, but some one of his Corps must do the deed, and the responsibility for the execution of it in a proper and humane manner devolves on the Veterinary Officer:—

A—Casting.

B—Disposal:—

(i) For work in Civil pursuits e. g. Agriculture

(ii) For Food.

(iii) For Bye-products.

C—Accounting and amounts realised.

D—Disposal on Demobilization.

### **CASTING.**

Apart from animals which are incurably injured or diseased and which are destroyed as necessary under the orders of the Director of Veterinary Services or his representatives in Formations, the first step in the disposal of animals wasted by War is that they are cast by competent authority as unfit for further Military Service. No casting, or at least final casting, was done at the Front, the principle being that only effective animals were maintained with Fighting Formations, the ineffectives being evacuated to Lines of Communications. It was however left to the Administrative Officers of Formations to recommend the casting of cer-

### ***Animals Wasted by War.***

tain animals from their more intimate knowledge of them, and this was indicated on the Evacuation Rolls for action.

The Casting Authority was therefore the Inspector General of Communications, or the General Officer Commanding, Lines of Communications, as he was subsequently termed. Acting under this Authority the decision of casting was carried out by the Director of Remounts for what are designated Remount cases, i. e. animals too old for further service or those subject to vice, and by the Director of Veterinary Services or his Deputies on L. of C. for those suffering from infirmity or disease. All animals submitted for casting were duly entered on casting rolls and signed by the Director or his Deputy concerned. Furthermore they were shewn on the Forage and Animal Monthly Return of the Hospital or Depot and struck off charge when disposed of, so that check was accurate. It is not practicable during active warfare for units of fighting formations, i. e. above railhead, to maintain a Forage and Animal Account. The check on casualties, i. e. deaths, destructions, missing, and evacuations, is quite enough to impose on fighting units, and casting and disposal is much better carried out further back, where better facilities and a better market can be arranged.

It will be readily imagined that the Wastage of War chiefly relates to Veterinary disability, and only those who have seen it in concrete form can have any conception of what it means. I endeavoured to illustrate it in my previous paper on "Wastage of Animals in War". Arrangements therefore for disposal in its varied forms were taken up by Veterinary Service quite automatically as it were, and as the Force increased and the war become more intense and prolonged, a Disposal of Animals Branch of the Veterinary Directorate was instituted to meet the necessity for the co-ordination of the various channels of disposal, the framing of contracts for the sale of animals for purposes of food, the installation of machinery for the abstraction of byproducts, and for the due accounting of the same. The misfits, the vice cases, and the ancient from Remount Service were transferred to this organization for disposal. The latter were comparatively few, for a Remount Service in war has no place



for any thing but efficient animals. Veterinary Service in France was fortunate in securing the services of a young officer for charge of the Disposal Section who not only was an expert in the necessary machinery for Bye-products, but a Chartered Accountant as well.

### **DISPOSAL.**

#### **(i) FOR WORK.**

There was very little disposal at first in France except of animals died and destroyed. It was not until the beginning of November 1914 that definite casting rules were published in Routine Orders. The Indian Mounted Troops on proceeding up country left some very inferior animals at Marseilles. Many were unsuitable from a Remount point of view, and infirm. They were cast and sold, the worst being destroyed. I do not think it could have happened under a system other than Silladar. But in the early days of rapid mobilization, our Home Force was not altogether free from its Methuselahs and infants. I rather fancy that in some instances father had dropped out of the ranks and his place taken by a member of his family of questionably discreet years, or vice versa. It is wonderful how such things arrange themselves when the desire for combat or otherwise (particularly the otherwise) is conceived, and even more wonderful is the adroitness with which these warriors find out Veterinary Hospitals and the reputed comfort thereof.

On the publication of Casting Rules, sales were held at the Base, Advanced Base and at PARIS. After a while these were stopped by order of the Army Council in deference to public opinion at Home, and instructions were issued that all cast animals were to be destroyed. From an economic point of view this made little difference, as it was possible to obtain almost as good an average price for purposes of Food as for work. But the destruction of really useful life has very little to commend it; indeed it is sheer waste, and moreover, in spite of all argument which can be brought forward to the contrary, sentimental or otherwise, an animal, useful still in certain spheres, has just as much right to

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live as the man or woman who advocates or clamours for his destruction to remove him from any danger of cruelty.

The French Ministry of Agriculture was much perturbed at the order for destruction of horses, as they depended on us to help them out in their replacements in Districts, of horses requisitioned for Military purposes. Subsequent events shewed how necessary this was and how correct the view of the French Ministries of War and Agriculture. So great was the drain on their own resources in France that by November 1917 not only had 1,188,539 animals been bought in America and Spain to supply Wastage (*Journal of Royal United Service Institution*, May 1919), but for rehabilitation at the end of hostilities they took as many animals as we could dispose of, and could have taken many more.

However, on the representation of the French Government, the order for destruction was rescinded in favour of sale of suitable animals to Agriculturalists and Breeders at the rate of not more than two animals per person, the bona-fides of each person being certified to by Mayors of Communes. This continued to the cessation of hostilities, when of course very serviceable and good animals were put on the market under the measures of demobilization.

The average price of cast horses and mules, taken together, sold to Farmers and Breeders during hostilities worked out at about £ 22 per head. A statement of the turn-over will be given later on in the article.

**(II) DISPOSAL FOR FOOD.**

Excepting for dogs and cats, the flesh of horses in England was not used as food previous to the War. On the Continent it is different. In France, Belgium, and Germany it is quite commonly eaten, both in the form of sausages and as prime cuts. The law demands that it should be sold as horse flesh, and the shops are all distinctively designated, e. g. *Boucherie Chevaline*. In Paris there is a special and well ordered *Abattoir Hippophagique* with cubicles for slaughter and dressing of the carcasses, and stabling for about three hundred animals. This abattoir was our principal centre for the disposal of animals for

purposes of food. The President of the Institution was our chief contractor, and he was also the President of the Chevaline Industrie de Paris. Animals were sent by truck loads from the various Veterinary Hospitals and Convalescent Horse Depots, accompanied by personnel of the R.A.V.C. They were met at the different railway stations of Paris by the contractors' men and taken to the abattoir under the supervision of a Non-Commissioned Officer of the R.A.V.C. They were weighed at the abattoir and were sold live weight at 1 Franc per kilo for thin animals (class B) and Frs. 1.50 per kilo for those in good condition (class A). Thin animals were used for sausages, the stouter ones for joints. Transactions were all cash and the money paid into the local treasury office. Regular contracts were drawn out, and deposits were lodged by the contractors in the office of the Command Paymaster. So extensive did the transactions assume as the war progressed, the number of animals running up to 600 and over per week, that for the personal safety of the young officer detailed to collect the money, payment was permitted to be made by cheque. A small detachment of Royal Army Veterinary Corps consisting of an officer, a serjeant, and a corporal as accountant clerk, was maintained in Paris to watch our interests and those of the animals. The adaptability of the British Officer to business pursuits was well illustrated in the young officer who was an Oxford graduate and a professor of French in a colonial university previous to the war. What he did not know about this particular line of business, both wholesale and retail, after several years' experience, was not worth knowing.

The average weight of a class A animal (good condition) was about 450 kilos, so that the proceeds were  $450 \times \text{Frs. } 1.50 = \text{Frs. } 650$ . A class B animal (Debility and poor condition) weighed about 300 or 350 kilos, so that at Frs. 1 per kilo the sum of Frs 300. to Frs. 350 was realized. Contractors were wholesale dealers and supplied retail shops. All carcasses were passed by Municipal meat inspectors, and in the selection or submission of animals for purposes of food, Officers of the R. A. V. C.

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concerned were strictly charged that no animals were to be submitted but what were perfectly suitable, and in this respect they acted in the role of meat inspectors themselves. Any animals that did not come up to the desired standard were disposed of for bye-products.

Perhaps it will be interesting to readers, and as illustrative of the greater use which is made of horse flesh on the Continent than in the British Isles, if I enumerated the trade terms and prices which ruled in Paris in the spring of 1918. Briefly these were as follows:—

	Wholesale.	Retail.
<b>Filet (4 to 5 kilos only) ...</b>	<b>Frs. 3 50 per kilo.</b>	<b>Frs. 7.00 per kilo.</b>
<b>Tranches (principal cuts, about 90 kilos) ...</b>	<b>„ 2.60 „</b>	<b>„ 4.50 „</b>
<b>Gros Bout (Brisket) ...</b>	<b>„ 2.60 „</b>	<b>„ 3 00 „</b>
<b>Jambes ...</b>	<b>„ 1.60 „</b>	<b>„ 1.60 „</b>
<b>Nervoux (low legs) ...</b>	<b>„ 2.00 „</b>	<b>„ 2.40 „</b>
<b>Abats (Tongue, Heart, Liver) ...</b>	<b>„ 1.00 „</b>	<b>„ 2.40 „</b>
<b>Cervelle (Brain) ...</b>	<b>„ 1.25 „</b>	<b>—</b>
<b>Collier (-20 kilos) ...</b>	<b>„ 2.00 „</b>	<b>„ 2.40 „</b>
<b>Basse viande (scrap) 50 kilos ...</b>	<b>„ 2.00 „</b>	<b>„ 2.40 „</b>
<b>Saucisson (ordinaire, fresh) ...</b>	<b>„ 2.00 „</b>	<b>„ 3.40 „</b>
<b>Ditto (Sec) ...</b>	<b>„ 4 00 „</b>	<b>„ 6.00 „</b>
<b>Rognures (cat's meat) ...</b>	<b>„ .50 „</b>	<b>„ .60 „</b>

28,384 animals were sent to the Paris Abattoir for purposes of food during the War up to the Armistice, and the average price realized was £ 12:16:0: each. After the Armistice up to the 31st March 1919, 8664 were sent, and as they were a better class, on demobilization, the average price was £ 18:10:0. per animal.

In addition to the Paris custom, a large number was disposed of to local vendors at towns in which Veterinary Hospitals were situated, i.e. Havre, Rouen, Forges-les-Eaux, Abbeville, Boulogne, Calais, and St. Omer, 16,578 being thus sold previous to the Armistice at an average price of close on £ 14, while after the Armistice up to the 31st March 1919, 20,679 were similarly disposed of at an average price of a little over £ 20. The latter included animals classed for destruction on demobilization and dis-

posed of in areas occupied by our Armies, a great boon to the population and refugees returning to those areas. It also included the cast horses of the Army of the Rhine, as animals were not permitted to be sold in that region excepting for food.

In every case the same procedure of destruction in the presence of a Veterinary Officer, the guarantee of suitability for food, and the accounting, was followed.

The Disposal of Animals Branch also maintained Butchery Detachments at the Abattoirs of Abbeville and Boulogne, and dressed carcasses for Paris or local consumption, and for delivery to the Army Service Corps for Coloured Labour Companies and Prisoners of War. These two small detachments previous to the Armistice dressed 4536 carcasses, and 3903 afterwards, roughly at a turn over of £ 20 per carcass. For a very long time, even though it represented a reduction in the import of food-stuffs, our Home Government would not consent to the issue of horse-beef as a ration to Prisoners of War, but to the evident appreciation of the prisoners, who were quite well aware of its good, sound, clean quality, issue was eventually permitted, and about 240 animals per week were dressed by our Butchery Detachments for this purpose. Our own men were also partial to certain delicacies, and several formal requests for liver, heart, tongue etc. having been received, General Headquarters ruled that such might be issued as a free extra if demanded. Imagine liver and bacon, saveloy of heart, boiled or pickled tongue, and brain fritters for breakfast.

The total amount realized in France, Belgium, and the Rhine Provinces in the disposal of animals for food up to the end of March 1919 reached the colossal sum of £ 1,313,323-0-0.

### **(iii) DISPOSAL FOR BYE-PRODUCTS.**

In the first few months of the war a certain amount of difficulty was experienced in the disposal of dead animals. Horse slaughterers, owing to mobilization or requisition of their horses, were difficult to procure, and either a charge for removal was demanded, or no payment for the carcass could be obtained. Later on, fifteen francs per carcass was obtainable, the contrac-

### ***Animals Wasted by War.***

tor creating a dump and a powerful smell at the same time. At a still later period, when casualties were very heavy, the Veterinary personnel of Hospitals and in Army areas, whenever possible, undertook the flaying of carcasses, the hides being salted and the remains buried in pits. There are now some very valuable animal pits in France, the contents of which will represent considerable wealth to the owner in manure specially suitable for vineyards.

At last, however, perfection was reached in the matter of disposal both from a hygienic and economic point of view. Machinery was obtained for the rendering down of carcasses, and the average yield per carcase so treated amounted to about £ 4-0-0, viz:—

			£.	s.	d.
Hide.	...	...	1	0	0
Flesh (dried)	...	...	1	9	3
Fat.	...	...	1	5	0
Bones and Hoofs.	...	...	0	5	0
Hair.	...	...	0	0	9
			<hr/>		
			4	0	0
			<hr/>		

Seven installations were arranged for on Lines of Communications, each with a personnel of fourteen men, and capable of dealing with thirty carcasses daily if necessary or as the situation demanded. These installations were termed "Horse Carcase Economisers" and were numbered serially as self-contained units. Four functioned at high pressure, and in view of final disposal on demobilization it was thought that certain of them would have to be duplicated, but the demand for animals for repatriation and for purposes of food reduced the necessity for further "economiser" arrangements.

The necessary plant consisted of:—

Skinning platforms (concrete).

Boiling Tanks (2), galvanised iron, 500-1000 gallons, for bones, entrails, etc.

Boiler for steam.

Small petrol engine for driving machinery.

"I. W. E. L." dryer, steam pressure, for desiccating flesh.

Turbine Fat Extractor (750 revolutions per minute).

Revolving meat cutter.

Bone crusher.

Skin curing room (cemented floors).

Store room for desiccated flesh, oil drums etc.

Office.

Extras, i. e. Decauville line and trucks to manure dump.

The total cost of an installation was from £ 1000 to £ 1200, but the special machinery, viz. the Dryers, Turbine Fat Extractors, Meat Cutters, and Bone Crushers were presented by the Royal Society for the Prevention of Cruelty to Animals at a cost of £ 500 each sett.

There was no difficulty in getting expert skimmers, and Prisoners of War assisted.

Arrangements were made to screen off the skinning platforms as much as possible from the chamber in which animals were destroyed or where working teams of horses visited.

Hides, after being cured, were bundled and sent to England. Between September 1916 and March 1919, 36, 877 hides were despatched.

Carcases yielded from 3 to 5 gallons of oil. It realized 13 Francs per gallon in Paris for soap manufacture.

An average carcase would yield one hundred weight of desiccated flesh, and it was sold in London for £ 31 per ton for pig and poultry food, or for dog biscuits. It keeps perfectly good and fresh for a long time, and there is no unpleasant smell.

Bones, after boiling, were crushed and degreased in the Turbine Extractor and shipped to London, realizing from £ 7 to £ 15 per Ton.

Hoofs were sold to a Paris Contractor at Frs. 32 per 100 kilos.

Hair was taken over by the Railway Operating Division for piston packing.

Blood was desiccated, and at the Abattoir at Boulogne a cer-

## ***Animals Wasted by War.***

tain amount was taken over by the Royal Air Force for the manufacture of "Stickit" for aeroplane wings.

By special arrangement, the Inspector Q. M. G.'s Services (Messing and Economies) used the Turbine fat Extractors for the extraction of Beef and Mutton fat from the swill of units wherever an Economiser was installed. His profits from fats must have been enormous: the dried product of the swill was mixed with the desiccated flesh.

13, 670 carcasses were handled by the Horse Carcase Economisers up to 31st March 1919, and their gross takings amounted to £ 55050-0-0. Profits would have been greater if Economisers could have been installed earlier, but of course it will be realized that the very essential munitions of War take a much more prominent place in the priority of import. However, when duly installed they produced excellent results, and they were certainly very hygienic and quite free from the putrid or unpleasant smell which may attend a wet process of disposal.

It was not practicable to adopt Horse Carcase Economisers in Army Areas to deal with animals dead and killed. The utmost that could be done was to flay the died and destroyed, and send the hides to Lines of Communications for curing. The hides of wounded animals were of little value, hardly repaying the trouble or cost of flaying.

No serious Contagious Disease cases were included even in this method of disposal.

### **ACCOUNTING AND AMOUNTS REALIZED.**

All animals cast and sold to Agriculturalists, or cast and disposed of for purposes of Food were struck off charge on voucher, the casting roll in triplicate being used and accompanying the animals for this purposes. The proceeds of sale having been filled in against each animal, and an endorsement of receipt of the money entered by the Field Cashier, the rolls were returned to the unit concerned, whether Remount or Veterinary unit. One voucher was used to support the monthly Forage and Animal Account which was submitted to the Financial Adviser for scrutiny and check; the second copy was retained by the unit



for record, and the third was sent to the Director of Veterinary Services at General Headquarters to enable him to make out his financial Statement for inclusion in the Controller of Salvage General Return, and for audit.

Those animals died and destroyed as unfit for food and sent to Horse Carcase Economisers were struck off on ordinary voucher bearing receipt from the Officer in charge of the latter, a copy of such voucher again supporting the Monthly Forage and Animal Account submitted to the Financial Adviser.

The adjustment of the accounts for the sale of various articles of Bye-products was carried out in the Disposal of Animals Branch of Veterinary Directorate in consultation with the Controller of Salvage. The Government at Home having control of all hides, notification of receipt and a somewhat complicated trade classification was only received, and an arbitrary value was fixed by us for purposes of account. Other articles were cash transactions under contract, excepting hair, which was a paper adjustment with the R. O. D. based on the market value.

The following tables shew the working of the Disposal of Animals Branch in two periods, viz. Table "A" from its inception up to the cessation of hostilities (November 11th, 1918), and Table "B" during the period of armistice and on demobilization up to the 31st March 1919. During the period covered by Table "A", the establishment of the Headquarters of the Disposal of Animals Branch consisted of one Officer, one Serjeant and one Worker W. A. A. C.; during the second period covered by Table "B", when the work of check and accounting of animals sold in Army areas was very heavy, the establishment was increased to two officers and six Other ranks of which two were W. A. A. C. It cannot be said to be a very extravagant establishment in view of the amount of money involved.

**Animals Wasted by War.****Table "A".**

Detail.	No. of animals.	approximate amount realized.		
		£.	s.	d.
Sold by auction to Farmers and Breeders ...	7,775	168,868	0	0
Sold to Paris Horse Butchers ...	28,384	364,438	0	0
Sold to Local Horse Butchers ...	16,578	231,621	0	0
Dealt with by Butchery Detachments and sold as dressed carcasses ...	3,552	44,106	0	0
Dealt with by Butchery Detachments and issued to Labour Companies or Prisoners of War..	984	21,100	0	0
Dealt with in Horse Carcase Economiser Plants for conversion into Bye-Products ...	7,061	28,244	0	0
Total ...	64,334	858,377	0	0

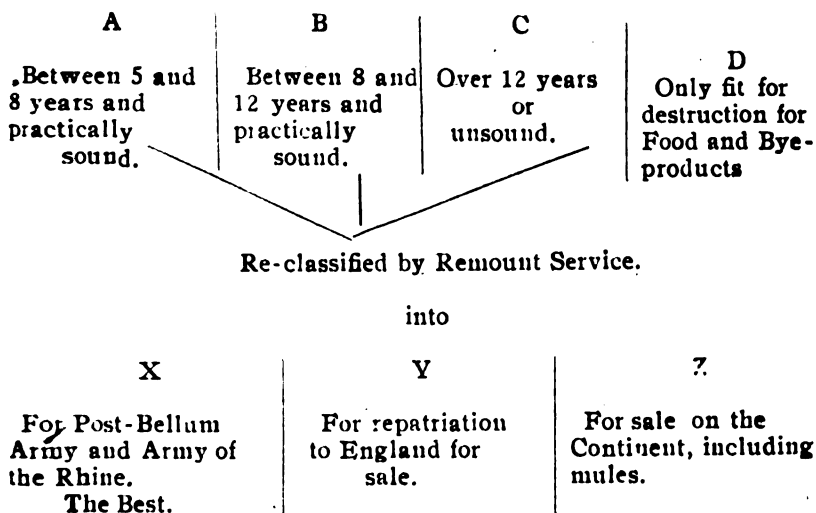
**Table "B".**

Detail.	No. of animals.	Approximate amount realized.		
		£.	s.	d.
Sold by Auction to Farmers and Breeders ...	112,132	3,778,907	0	0
Sold to Paris Horse Butchers ...	8,664	160,474	0	0
Sold to Local Horse Butchers ...	20,679	414,919	0	0
Dealt with by Butchery Detachments and sold as dressed carcasses ...	-	-	-	-
Dealt with by Butchery Detachments and issued to Labour Companies or Prisoners of War..	3,903	76,665	0	0
Dealt with in Horse Carcase Economiser Plants for conversion into Bye-Products ...	6,699	26,796	0	0
Total ...	152,077	4,457,761	0	0

**DISPOSAL ON DEMOBILIZATION.**

I will close the article with a brief reference to the system pursued in the disposal of animals on Demobilization, and with a few Statements marked Appendices I, II and III which will shew the rate at which this was effected, and the proceeds of those disposed of in France and Belgium. The figures do not include the animals of the Canadian Corps who undertook the sale of their own, nor of the Portuguese Force who took the majority of their animals back to Portugal. No live animals were sold in Germany.

The principle followed was that all animals, whether with Formations, in Veterinary Hospitals and Convalescent Horse Depots, or in Remount Depots, were first examined by Boards of Veterinary Officers and classified by them into the following categories according to age, soundness, or disability:—



From a given date, fixed at 1st January 1919, stock was taken of all animals on the strength of units. Forage and Animal accounts were adopted by units in Army Areas as well as those on Lines of Communications, so that check on disposal could be maintained. In transfers for purposes of sale or repatriation the peace Army Form 0.1640, a very useful form, and modified to suit the occasion, was used.

***Animals Wasted by War.***

Category "D" (Destruction) was got rid of as soon as possible, and Veterinary Hospitals and Convalescent Horse Depots cleared with all speed to hold animals demobilized.

By the first week in February it happened that men were being demobilized at a greater proportionate rate than animals, and a sale in bulk of 50,000 to Belgium having proved a failure through slowness of take over, it was decided that Armies should arrange sales in their respective areas, using their Mobile Veterinary Sections of Divisions and Veterinary Evacuating Stations of Corps as Disposal and Accounting units, the Remount Service supplying the animals from their "Z" Category by local arrangement. The usual sales by Veterinary Service on Lines of Communication were extended considerably, and again fed with "Z" Category animals from Remount Service, who at the same time progressed with the repatriation of their "Y" Category horses to England up to approximately 62,000. So rapid was the disposal by sale, that it was necessary to cry a halt at the beginning of April lest it was overdone. The machinery of disposal had got into such good working order, and demand for horses so great, that there would have been no difficulty in disposing of many more thousands at fairly good prices. Heavy draughts were keenly sought after, and prices from £ 100 up to nearly £ 200 were given in some instances. Sales by private treaty and selection by Municipalities and Farmers Associations were also arranged through Prefects, and these were appreciated, as intending purchasers could have a good look at the animals beforehand and make their selections. The prices were arranged by a committee of officers. Every animal and its price was entered on the usual Casting Rolls and submitted through the Disposal of Animals Branch for audit. In a few weeks the whole of the accounts were passed by the Financial Adviser and the War Office, a most satisfactory ending to a no light undertaking. The simple Statements shown as Appendices will be found interesting reading.

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# Animals Wasted by War.

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## APPENDIX I.

### British Expeditionary Force France.

*Disposal of Animals during February to July 1919.*

Week ending.	Strength.	Died and destroyed including Horse carcase. Economiser.	Disposal.		Add Re-mount Sales.	Total disposed.
			Sale.	Horse Butchers.		
Feb. 6th	326286	606	4177	2486		7269
" 13th	312925	612	6238	2132		8982
" 20th	292824	619	12963	2654	914	17150
" 27th	260061	550	16791	3125	550	21016
						<u>54417</u>
Mar. 6th	222917	457	20450	3185	1762	25854
" 13th	193260	371	19896	2990	2224	25481
" 20th	160935	308	17049	2889	1797	22043
" 27th	135228	256	13680	2244	1585	17765
						<u>91143</u>
Apr. 3rd	116678	205	7062	1248	1706	10221
" 10th	47813	81	587	721	1337	2726
" 17th	39833	111	1159	771	1258	3299
" 24th	31866	47	4757	503	884	6191
						<u>22437</u>
May 1st	26665	38	1758	265	847	2908
" 8th	28432	31	1353	189	952	2525
" 15th	27079	21	2061	139	-	2221
" 22nd	25790	22	1037	164	899	3122
" 29th	23389	24	2308	108	599	3039
						<u>13815</u>
June 5th	24088	21	1094	159	542	1816
" 12th	22553	27	923	76	395	1421
" 19th	24703	15	102	117	390	624
" 26th	23063	21	4	98	400	523
						<u>4384</u>
July 3rd	22866	8	485	95	397	
" 10th	21915	15	-	82	594	985
" 17th	20169	20	957	64	596	691
" 24th	19933	19	-	72	359	1637
" 31st	20004	12	210	60	594	450
						<u>876</u>
						<u>4639</u>
						<u>190835</u>

#### Horse Carcase Economisers

(i.e. Installations for reduction of carcasses to Bye-products of skin, fat, desiccated flesh, hoofs etc).

**Animals Wasted by War.**

**APPENDIX II.**  
**British Expeditionary Force France.**  
**SUMMARY OF COMPLETED SALES**  
*Period 11th November 1918 to 5th July 1919.*

Week ending.	Remount Service.			Veterinary Service.		
	Amount realised during week.		Total realised from 11.11.18 to date.	Amount realised during week.		Total realised from 11.11.18 to date.
	Francs	Cts.	Francs. / Cts.	Francs.	Cts.	Francs. Cts.
15th March 1919	2,276,964	85	18,981,916 60	18,145,449	00	63,494,413 80
22nd "	2,301,572	00	21,283,488 60	12,921,042	00	76,415,456 80
29th "	1,856,589	50	23,140,078 10	18,833,362	00	95,248,817 80
5th April	2,102,121	90	25,242,200 00	16,525,353	80	111,774,171 60
12th "	1,590,330	00	26,822,530 00	8,764,815	75	120,538,987 35
19th "	1,546,642	00	28,379,172 00	5,127,887	05	125,666,874 40
26th "	1,047,450	00	29,426,622 00	2,135,863	40	127,802,737 80
3rd May	767,125	00	30,193,747 00	4,906,872	00	132,709,609 80
10th "	1,008,189	00	31,193,747 00	5,519,507	75	138,229,117 55
17th "	2,179,742	90	31,201,936 00	2,873,148	00	141,102,265 55
24th "	658,830	50	33,381,678 90	670,279	60	141,772,545 15
31st "	670,225	00	34,040,509 40	2,317,043	35	144,089,588 50
7th June	628,757	50	34,710,734 40	3,486,272	75	147,575,861 25
14th "	515,470	00	35,339,491 90	2,646,756	95	150,222,618 20
21st "	478,800	00	35,854,961 90	988,115	40	151,210,733 60
28th "	461,082	50	36,333,761 40	2,828,457	15	154,039,190 75
5th July			36,794,844	6,600	00	154,045,790

The above information extracted from weekly return circulated by D.Q.M.G., British Troops in France and Flanders.

**APPENDIX III.**

**Army Veterinary Service, France and Flanders.**

*Amount realised by Sale of Animals in France & Belgium from 11th November 1918 to 30th June 1920.*

	Gross amount realised in respect of Sales of Animals Period 11.11.1919 To 30.6.1920	AUCTIONEERS FEES		Advertising Miscellaneous.	Nett amount credited to the Public.
		Paid direct by sales Officer.	Deducted at Source by Auctioneer		
<b>France</b>	<b>Frs</b>		<b>Frs</b>		<b>Frs</b>
(a)	139567058.75		6100651.65	The Auctioneers Commission paid the advertising expenses and converted all charges on the Sales of animals by the British Army.	133466407.10
(b)	15034846.50				15034846.50
<b>Total.</b>	154601905.25		6100651.65		148501253.60
<b>Belgium</b>	<b>Frs</b>				<b>Frs</b>
(a)	24371087.00		668203.20		23702883.80
(b)	2409690.15				2409690.15
<b>Total.</b>	26780777.15		668203.20		26112573.95.
<b>Grand Total.</b>	181382682.40		6768854.85		174613827.55.

NOTE:—(a) Sales of animals for work.  
(b) Sales of animals for food and for Bye-products.

## **THE MERITS AND DEMERITS OF THE VARIOUS BREEDS OF ANIMALS USED IN WAR.**

BY MAJOR GENERAL SIR. J. MOORE. K. C. M. G., C. B.

*Director of Veterinary Services in India.*

Wastage of animals in War, and experience gained with animals during the conduct of campaigns, very naturally and appropriately lead to questions of the comparative value of the different breeds and classes for Military Service. Military efficiency is aided by enquiry and report, and production on right lines for Military requirements is stimulated.

So unusual were the transactions and expenditure in animals during the late War, and so profound were the lessons in endurance, utility, and suitability for particular purposes to be derived, that the Army Council on the conclusion of hostilities called for a special Report from the British Expeditionary Force, France, for the information of the Board of Agriculture as to the merits or otherwise of the various classes of horses that had been employed by that Force, and particularly with regard to the heavy breeds of horses. The Field Marshal Commanding-in-Chief, whose knowledge of animals leaves little to be desired, and whose constant solicitude for their care and wellbeing during the War was so marked, expressly commanded that report should be furnished, and the present article, in so far as it relates to common interest, embodies a certain amount of the information then supplied.

Added to this it is proposed to discuss the merits and demerits of animals employed by the Army in India in its Frontier Warfare.

In a previous article I endeavoured to show that wastage of animals in War, at least the preventable item of it, was governed or influenced by certain factors, which may be summarised as follows:-

- (a) Remounting, and ability to place animals in spheres of service best adapted to them.
- (b) A knowledge of Animal management, with particular reference to food and feeding, water and watering, and bodily hygiene.



(c) Acclimatisation.

(d) Nature of work to be performed, and fitness for the same.

(e) Contagious and Specific Disease.

The same factors come into operation when the merits or demerits of animals in War are reviewed. The greatest of all factors is perhaps the mind of man, for the merits and demerits of animals, inherent or otherwise, are intimately bound up in the ability and thoughtfulness of individuals who are constituted their masters, philosophers and guides.

Wastage expressed in actual figures is not always a true criterion of animal efficiency, but from our experience generally it is possible to formulate a reasonably good idea of the utility or otherwise of the various classes which have been drawn from different countries and localities to participate in War.

Speaking generally, the close of the Great War presents to our minds exactly the same opinion that was expressed during and at the end of the Boer War, viz. that the small animal of whatever class or type is the best adapted for War. The reason is obvious. The bigger and taller the animal, the greater the ration required; the greater and bulkier the ration, the longer the time required to consume it. Difficulties of supply, amounting at times to shortage, and curtailment of the time necessary for consumption, are inevitable circumstances of War and especially during particular offensive periods. Debility (poor condition) becomes the chief item of wastage, and this condition may be spelt with four letters, viz. F. O. O. D. The tall, big, leggy animals of any class, as a rule, form the majority of Debility cases. It was a noteworthy feature in France that the small pack animal or cob used for various purposes was conspicuous by his absence from Veterinary Hospitals. The wastage in Light Draught Mules as compared to Light Draught Horses on an equal ration was infinitely less, in fact the small amount of Debility (poor condition) in mules was remarkable.

Size therefore plays a very important role in the general utility and success of the Army animal where so much depends

on ration, and for the various arms of Military Service the following MAXIMUM heights are recommended:—

1. Officers Chargers:—	Hands.	
(i) General Officers	...	16 0
(ii) Cavalry Chargers	}	15 3
(iii) R. H. A. Ditto		
(iv) R. F. A. Ditto.		
(v) Infantry Ditto.	}	14 2 to 15 1, according to Class of Pony, cob, or small well-bred horse.
(vi) Other Services Ditto.		
2. Cavalry Troop horses	...	15 2
3. Other Riders	...	15 1
4. Pack horses	...	15 0
5. R. H. A. (L. D.) Horses:—		
Lead	...	16 0
Centre	...	15 3
Wheelers	...	15 2
6. R.F.A. (L. D.) Horses:—		
Lead	...	15 3
Centre	...	15 3
Wheelers	...	15 2
7. Heavy Draught Horses	...	16 1
8. Light Draught Mules	...	15 2
9. Pack Mules	...	14 3
		Ordnance Mules India (M.B.) are from 13.2 to 14 1 and stout.

In estimating the heights quoted above it is intended that they should be viewed as a guide only. Considerations of proportionate make and shape, and robustness of constitution, are primarily implied, and it goes without saying that these are necessary factors in the suitability of an Army horse of whatever class.

**HEAVY DRAUGHT HORSES.**

In remarking on the merits and demerits of the different breeds of Heavy Draught Horses employed during the war, it is necessary to bear in mind that these animals have a greater value in civil life (commercial and agricultural) than for military use, and therefore it is wrong to judge them entirely from a military standpoint. They are also so surrounded with pride of country, competition of production, fancy, fashion, preference, prejudice even to controversy, and ill-luck during the war, that comparative consideration is not altogether an easy one. Moreover in France the latter difficulty was increased by the fact that so many animals were of crossed breeds, or so untrue to type, or so altered in form by the vicissitudes of campaign, that a differentiation of breed was in a large measure impossible. However their value as a whole was highly appreciated by competent impartial judges in France, for on demobilization and sale of surplus animals, demand was so great that very high prices were realized. I call to mind one sale of fifty-two Heavy Draught Horses where the average price realized was Frs. 3166, two English Shire Horses bringing Frs. 5150 and Frs. 5000 respectively, though American Percheron crossed strains - notably Percheron and Clydesdale crosses - ran them pretty close. I may mention also that Representatives of Land Reconstruction sent by the French Ministry of Agriculture to interview me and to show me types of mares which they desired to purchase for Agriculturalists in devastated areas, chose as the best type a big Shire, a tolerably good specimen of that breed.

**SHIRE HORSES.**

Without question the Shire Horse as bred in England is the finest Heavy Draught Horse in the World. His merit is his size and strength, and if bred to proper type he is perfect in form. He commands a commercial value unequalled by any other draught animal, and it is this commercial advantage which will ever commend his production to the Agriculturalist and

Breeder, and secure for him the premier place in England. It pays the ordinary farmer to breed him, to use him first for farm work for which he is most suitable, and when nearing maturity to sell him to Railway Companies. Milling and Lumber Companies etc. for heavy haulage work. With legs and feet specially formed and adapted to get a good purchase on the ground, and with his muscular power and weight so perfectly distributed and balanced, the heavy haulage loads which he is capable of moving are astounding. I do not think he has his equal in this respect.

I remember on one occasion at a well-known railhead in Northern France, necessity arose to place some trucks for unloading. A Mobile Veterinary unit near by chanced to have a big Shire whose appearance indicated an association with British Railways, and his services were enlisted for movement of the trucks. The old familiar way in which he turned to them, the quiet steady pull, and the stop at the word of command, was most entertaining. He was back to his old job, and his metier having been discovered, he was in constant request and performed very useful work at that railhead.

All animals are creatures of environment. The climate and environment of England suits the Shire Horse, and his breed is therefore well established in that country. In other words he is good because he is born in England, the same as the Clydesdale is best in his home in Scotland, and the Percheron excellent in France. But in the breeding of any of these classes outside their own particular habitat, say in a foreign country, the result is not altogether satisfactory. Type is lost, nondescripts are apt to be produced, and financially there is no gain. On this account it is extremely doubtful if the Percheron as a pure breed will ever make much headway in England, to which country he has recently been introduced by interested communities. The English farmer is also too conservative to change his views : he would prefer to stick to the animals he is accustomed to and knows, than to resort to an alien, however good.

The massive size of the Shire is his drawback as a War

Horse. He is too big. He requires a large ration, and all horses which have to perform heavy hauling draught work must have bulky food in the form of hay and straw, which from force of Military circumstances it is not always possible to supply or find opportunity to consume. Major-General Sir Frederick Smith in his Book "Veterinary Hygiene" very aptly hits the nail on the head in the following remarks :—

"The length of time it takes a horse to consume its daily diet is a question which seldom strikes anyone to enquire into, yet it is of utmost importance, especially for horses employed in Commerce and Military life. It takes a horse from five to ten minutes to eat one pound of corn, and fifteen to twenty minutes to eat one pound of hay. We shall not be far from the truth in saying that they require from five to six hours out of every twenty-four for feeding, that is to say, one quarter of the day must be expended in taking in nourishment for the repair of the machine. We see here the wisdom of the carter and the cabman who put on the nosebag at every opportunity".

Alas for the opportunity often on Field Service, and it sums up the chief demerit of the Shire horse, or indeed of any Heavy Draught Horse in War.

Another drawback to Shire horses, and in like degree to Clydesdales, but not to the same extent in the crossed Percherons (at least in those purchased overseas and sent to France) is that they ill-stand movement by rail or sea from their original abode and surroundings. Their temperatures go up, they refuse their food, they begin to cough, and they are laid open to attacks of respiratory trouble. Very often movement from one stable to another is sufficient to bring this about. We had no luck with our heavy horses until we adopted a thorough system of taking temperatures, first at the place of purchase before movement to a Remount Depot, subsequently at Remount Depots before shipment to France, and again on disembarkation. They above all other animals necessitated residence in Remount Depots in France before being drafted to units in the Field, endeavour being made to hold them up to three weeks. Their

temperatures were carefully taken before entrainment, an absolutely necessary procedure.

In the early days of the war, the mortality amongst our beautiful Shires from respiratory disease was very heavy. Circumstances of rapid collection, change of surroundings, change of diet, and exposure all militated against them, and they became prey to Pneumonia of the Influenza type. Once over initial sickness and "acclimatised", they rendered a good account of themselves where suitably placed. It has to be remembered that the serious forms of Respiratory sickness in horses are referable to infection, and there is no doubt that the lethargic heavy horse is not only a readier prey to disease of this nature, but more easily succumbs than his lighter confreres.

The heavy feathering on the legs of the Shire horse - and in like instance of the Clydesdale - proved a distinct disadvantage for service at the Front in France. Nature, without question, intended this covering as a protection to the heels and lower parts of the legs from wet and from injury, whether from ploughing in the furrow or from treads, but however much an advantage in the stiff clay lands of England, it was quite incompatible with the liquid mud of Northern France churned up by countless animals and fouled at times to an intense degree by dung and urine. It was not possible to adequately clean such heavily coated legs, with the result that they were prone to "grease", cracked heels, and other affections of the skin of the legs; to remove the hair only produced or intensified a Seborrhoea. Votaries of fashion in their attention to the production of "feather", fine or otherwise, never dreamt of liquid filthy mud, sometimes knee and hock deep.

However, at Base ports, for Dock duty, and service on Lines of Communication generally, or under circumstances more or less approximating peace conditions, that is to say, for slow work on the top of the ground, with opportunity for getting a sufficiency of bulk in ration and plenty of time to eat it, and under favourable housing, the heavy Shire did well. With the absence of these conditions, more or less, he was not so suitable in forward areas,

and at times of supreme effort when extra care was lacking, he became a candidate for evacuation and the Veterinary Hospital.

The smaller Shire on the other hand gave a good account of himself at the Front, most certainly in Royal Army Service Corps Units, and even in Units of Heavy Artillery, provided he was of the right sturdy type and seasoned.

I have written more about the Shire than perhaps occasion requires, but having been brought up with him as it were, I may be excused in justly singing his praises. I close with remembrance of a little mare, the grand-daughter of a pure-bred Shire mare (a prize winner at Agricultural Shows) by two thorough-bred crosses (the last being by "The Mate" winner of the Two Thousand Guineas), who was a good little hunter, a great stayer, and who took a gallant part in the Relief of Kimberley, suffering death at the hands of the enemy.

#### CLYDESDALE HORSES.

From an active service point of view the same demerits of proneness to Respiratory Disease on movement from an accustomed habitat, heavy feathering of the legs and liability to "grease" and other diseases of the skin of the legs, exist in the Clydesdale as in the Shire, but he has the merit of being smaller and more active, and it was shown in France that provided he was of a short-legged, stout, sturdy build, his record even in the Forward Areas, was generally satisfactory. It is of course all a matter of suitable placing.

In no breed, however, does type appear to be so variable. Many indifferent animals were sent to the British Expeditionary Force, France. A large number were long-legged, flat-sided and light in the middle, absolutely useless animals for the heavy draught purposes of War. It was difficult to recognise many of them as Clydesdales. Indeed it was quite evident that if it is desired to maintain a place of supreme excellence, this very useful breed of horse requires considerable grading up in its breeding.

The Clydesdale strain found much favour with the Australian Corps in France, and the remarks of the Administrative Veterinary Officer of that Corps are worth recording:-

"There is little doubt in my mind and in all I have spoken to in this Corps that the best breed for Military work in the heavy class is the low clean-legged Clydesdale. Most of our horses from Australia were of this type, and they have been much admired by good judges of horse-flesh. They are smaller, more active, and yet have always been able to do as much work as the heavier Shire type, added to which they have obviously suffered less from the skin troubles of the legs, such as "grease", cellulitis and necrotic dermatitis. Their smaller size allowed them to do better on the ration, proving them to be more economical in feeding".

He further added with regard to Clydesdales and breeding:-

"For an Artillery animal, again the Clydesdale mare crossed with a thorough-bred stallion, gives as near the ideal as we have been able to breed in Australia, and the gunner type most favoured by the Indian Army. - Breeding with cross-bred stock is not found a success as animals throw back to unknown ancestors and we get reversion to undesirable types. The method I am advising has been proved by many animals used in this War, whose breeders and their methods I am familiar with".

The Assistant Director of Veterinary Services of the Canadian Corps who also had charge of all Remount arrangements of the Corps, while remarking adversely on the Shire during the War, giving the usual objections in respect to "feather", and a brittleness of feet, reported of the Clydesdale as follows:—

"The old fashioned, short legged, round barrelled type has proved very satisfactory. Those that are leggy and light of barrel have proved to be of little use".

I have quoted Colonial and Dominion views specially, presuming such to be perhaps more unbiassed than purely Home opinion.

Since my return to India on a third tour of Service I have visited nearly every Remount Depot, and am very much struck with the excellent Medium and Heavy Draught Horses received from Australia, and held under training primarily for Mesopotamia. I am all the more surprised because I never realized that animals



of this class were procurable in numbers in Australia, and specially from Queensland where I noticed from their brands many of them hailed from. Another surprise after coming fresh from the disposal of animals on demobilization in France, is the price at which these animals have been purchased and landed in India, viz. £ 45 and £ 50. If such animals had been offered for sale in France at the close of the War they would have realized anything from £. 100 to £ 200. A pair of medium heavy draught horses which I recently saw in the Horse Transport Company in Waziristan certainly would have realized £ 250 each horse. The majority them are Clydesdales and it is quite easy to pick out pure strains. At the sight of them I was instantly reminded of the remarks of of the Australian Corps in France. quoted above; and one could readily appreciate the Australian preference for the Clydesdale strain in draught horses. With such good material at reasonable cost, the thought naturally occurs to ones mind as to whether they could not be put to more general use in India for transport purposes both in Peace and War, and their production in Australia fostered. The small wheeled transport in common use in India, though suitable generally, absorbs a large number of carts, animals and men, and the employment of larger wagons (e. g. General Service), stronger animals, and fewer drivers carries a suggestion of economy, at all events for certain purposes or under certain circumstances. No doubt the policy of utilising the resources of India for Army purposes is a correct one to follow, but it is necessary to remember that conditions which chiefly govern the growth of young stock are either deficient or absent in that country, and for Artillery and other forms of heavier draught, resource elsewhere must be adopted. Australia, for instance, is a country, par excellence, of good grass and suitable climate, where stout and robust horses are raised, and it is a very happy circumstance that India has a call on the resources of that country to supply deficiencies. There is now not a single type or class of horse for Military purpose, from the light Indian Cavalry to the heavy Artillery Draught which cannot be procured in Australia. Furthermore, questions of supply of suitable animals are rendered easy by reason

of the fact that there are resident in that country regular exporters of animals to India, who not only know Army standards perfectly, but who are tutors towards suitable production in their own country. It only remains to remember that Australian horses, coming from a Southern zone with reverse seasons, require in India a period for acclimatisation, and this is more necessary in the lethargic heavier types than in the light horses for Cavalry.

#### SUFFOLK PUNCH

The number of this class of Heavy Draught Horse employed during the War in France was relatively very small, and experience of them was limited. In consequence, opinion was varied amounting to diverseness, some officers reporting extremely well on them, and others condemning them, as unsuitable for Army work by reason of their being "top-heavy", and thereby subject to lameness in the feet when called on to perform hard road work. They certainly had two outstanding merits for Service on the Continent, viz. (a) an ability to maintain a round stout condition (amounting to fatness) on a shorter ration than other Heavy Draught types, and (b) their clean legs in muddy circumstances, two assets which commended them highly in the eyes of Commanding Officers in the Field. The evidence which I gathered from Veterinary Hospitals pointed to weakness of the feet as the chief demerit of this breed of heavy horse. The remarks of one Veterinary Hospital Commander who was not only a very knowledgeable Civil Practitioner, but who had considerable experience both with units in the Field and in Veterinary Hospitals, are worth quoting:—

"The Suffolk Punch suffered from foot trouble owing to "more or less standing on feet and joints defective in shape and "make. This animal kept condition well, but as at home, is "unsuitable for hard road work".

On the other hand an Officer, whose powers of observance and opinion I rate highly, and who had a considerable pre-war experience in the purchase of draught remounts, reported on the Suffolk Punch as follows :—

"Is a very useful horse but inclined to be a little over-topped. I have had four or five of this breed during the War, and my opinion has entirely changed. I used to think they were soft and over-topped. I now think very highly of the breed. Those that I know were not soft nor over-feathered, and worked splendidly, far better than any other horse we had. The huge body, heavy neck, and head were made full use of by the animal while in draught. Instead of starting the load entirely by pushing with the hind legs, these animals used their weight by leaning into the collar and throwing the weight forward. Constitutionally they appear to be very strong and survived the conditions at the Front, but in most cases that I can recall, the Suffolk Punches were great pets in the Units and were very carefully looked after by their drivers".

There is a good deal of truth in the last paragraph of this officer's report. Care is all important for the success of any breed of horse in War, and the docility and good condition always maintained by the Suffolk Punch are sure to find for him a place of favour. Personally from my small experience of the Suffolk Punch, provided he is not over 16.1 in height-all above that height being rigidly excluded as unsuitable and undesirable - I consider him a very good and desirable War horse, being hardy, active, and even-tempered. If he is small, there will be no foot trouble.

The Third and Fourth Armies in France reported well on them : in fact, these Armies classed Suffolk Punches before Shires and Clydesdales for Military purposes.

#### AMERICAN HEAVY DRAUGHT HORSES.

Though not so weighty and powerful as our best English Heavy draughts, the American Percheron, or Crossed Percheron, on the whole gave great satisfaction and was universally liked during the War in France. He teams well, is active, has a good constitution, is a good doer, and has good sound legs and feet. The absence of hair on the legs was a great asset in

comparison to our English Heavies under the muddy circumstances of winter in the Forward Areas. He is best described as a Medium Heavy, and as such he is quite big enough for the Heavy Draught purposes of War. As a draught animal I do not consider him in any way superior to our English Shire or Clydesdale, or to the smaller of these breeds of which he may be considered a parallel, but there is no doubt that in war he can be more generally placed, and can stand hardships better than our Heavy Breeds. Whether or not his relatively satisfactory service in France was due in part to a return to the country of his ancestors, can only be surmised. He certainly stood the climate very well. He shipped to the country on the whole well, and suffered less from serious respiratory sickness on landing than the Heavy Shires and Clydesdales. At the same time it must be remembered, as I have previously remarked, that respiratory sickness is referable to infection, and in all classes of animals incidence of this form of disease was very greatly reduced by the rigid taking of temperatures on landing and previous to drafting to units. Moreover the heavy mortality experienced amongst Shires and Clydesdales was during the first winter of the war when they were practically without shelter, of any kind and subjected to incessant rain, a very different state of affairs to the ample and good accommodation provided by such times as American shipments of heavy animals commenced.

An idea of utility may be gathered from the records of one Veterinary Hospital in France, at which out of 120 Heavy Draught horses cast and sold in two years, 116 were British (the Officer Commanding was unable to differentiate Clydesdale from Shire) and 4 only were American.

In another Veterinary Hospital, a Committee of Officers, Royal Army Veterinary Corps, drew attention to the fact that a fairly large percentage of Heavy Draught American Horses had Sidebones, but expressed the opinion that this defect could soon be bred out by careful selection of sires, in like manner to its exclusion in our English Breeds following a more particular classification of the defect as an unsoundness.

A very interesting account of the Percheron horse and the extent to which he has found favour in both North and South America as compared to our English Breeds, may be obtained from Dechambre's *Traite De Zootechnie*, vol *Les Equides*, published by Messrs. Asselin and Houzeau, Place de L'Ecole de Medicine,-PARIS (a book really worth purchasing, and giving a description of all breeds of horses, the administration of Haras, and Remounting of the French Army), and a few remarks will not be out of place in this Article, Of course, it is necessary to add that from an Agricultural point of view, the land both in North and South America, does not require a heavy type of farm horse which the stiff clay land of England necessitates as a rule. At the same time the Percheron is a grand sire for a cross, and he is probably the most prepotent of all sires.

The first Percheron sent from France to the United States was in the year 1851. Up to 1872 purchases were exceptional. In that year mares as well as stallions were exported. Between the years 1880 and 1890, 1000 to 1200 Stallions and from 100 to 120 Mares annually were sent. Exportations slackened off until 1900 when they resumed fairly actively. At the same time the importation of Shires and Clydesdales into America would appear to have decreased. In the year 1903 the American Percheron Stud book registered 37,000 animals, while the Clydesdales numbered 10,000 and Shires 7,400.

The introduction of Percherons into the Argentine has also been recent. Seven Stallions were imported in 1900, 256 in 1906, and 180 in 1907. 177 animals, comprising 75 Stallions and 102 Mares were imported in 1908. In comparison with the latter during the same year (1908), 73 Clydesdales (54 Stallions and 19 Mares), 53 Shires and 47 Boulonnais were imported. The Stud Book Registers of the Argentine in 1909 as quoted by Mou Lesage of the Veterinary Institute, Buenos Aires, gives the following list of Mares :—

Percheron	...	1878 mares.
Clydesdale	...	1729 „
Shire	...	1100 „

***The Merits of Animals used in War.***

Hackney	...	414	„
Yorkshire	...	210	„
Suffolk Punch	...	169	„
Anglo-Norman	...	294	„
Hunter	...	45	„
Belge	...	30	„
Polo pony	...	10	„
<hr/>			
Total	...	5,879	Mares.

Percherons purchased by the Argentine are not so massive as those exported to the United States, and purchasers of the latter country have a preference for black colour instead of the "gris-pommele" which is the primitive colour of the Percheron.

Another very useful French Heavy Draught Horse, a few of which found their way into our Army by requisition in the early days of the War, is the Boulonnais, and as his home (Pas de Calais) was in our midst during our operations in Northern France, he became very well known to us and was much appreciated by good judges of horses. His colour is chiefly grey, not the usual colour for an Army horse (N. B.- there is no reason why this colour should now be debarred) but he is a good, compact, sturdy, stout-hearted animal, with a great record for draught, and an ideal farm horse.

The Heavy Belge (Brabantonne) with his massive crest, which we used to see a good deal of in England at one time, is too big as a War horse, but he is an economic factor in Belgium, and his breed entered into some of the crossed American horses used by us during the War. The Ardennes horse is very good and a favourite for Artillery purposes, and medium heavy draught.

In any community of animals, however, whatever the breed, there is always a variation in size, and the smaller horses of Heavy Draught strains, if other good points are equal, can and should be selected. For general draught purposes in Formations and units at the Front in France, the most satisfactory of all animals was the Heavy Light Draught Welsh cart-horse. Strong,

active and hardy, he is hard to beat for all-round draught purposes, and if the question of breeding specially for the Army ever arises, this type should be kept in view and followed. The draught animals purchased in Wales previous to the War for the Royal Army Service Corps were patterns of excellence, and they did remarkably well. We could have done with more of them.

### **LIGHT DRAUGHT HORSES.**

According to Army specifications and requirements, a Light Draught horse is one which should be capable of drawing a weight of 1200 lbs. for approximately twenty miles per day, walk about three miles an hour, and trot at an average of six miles. This is of course a simple guide to show the degree of power expected, and to indicate a necessary activity in this class of animal. It is based more or less on the comparatively easy times of peace, and work on level roads. War, however, upsets all fine calculations, and it is the ability to weather the varying vicissitudes of campaign, and to maintain energy under trying conditions and adverse circumstances that forms the chief desideratum of a draught-horse.

At the same time a study of the carefully thought out Tables of Transport, with details of vehicles and weights to be carried, given in our Field Service Pocket Book, is most instructive.

The heaviest wastage and the greatest demand during the late War related to light draught horses, and twenty of this class were purchased to one of all the other classes put together. It is really marvellous how the supply of suitable animals was maintained, because in recent years the production of this type of animal has been influenced by the substitution of mechanical means for trams, busses, and for many commercial and trade pursuits. Take for instance the London General Omnibus Company in 1903 with a stud of 18,000 horses, the Road Car Company 5000, Tillings 7000, & the thousands upon thousands of tram horses in all parts of the world, each animal probably requiring renewal every four or five years; all are now conspicuous by their absence, and it is a regrettable absence of animals, hard, inured to work and specially suited thereby for draught purposes of War.

It does not pay to breed them, at least in many countries, for they are not altogether an Agricultural type of horse. We very soon touched bed-rock in this class of horse in the United Kingdom, and purchase was resorted to elsewhere.

In speaking of British horses, it is necessary to point out that they are more commonly classed by Categories of Service than by Races. For instance, we speak of saddle horses and draught horses, and furthermore they are grouped into race horses, hunters, hacks, carriage horses, van horses, bus horses, coach horses, farm horses and so on. It is only in respect to Heavy breeds, Thoroughbreds, Hackneys, Cleveland Bays, Yorkshire Coach horses or whenever Stud Books are maintained, that allusion is made to particular breeds or races. We differ considerably in this respect from other countries, as for instance, Bretons, Norfolk-Bretons, Anglo-Normands, Petit Percherons, Ardennais, and Anglo-Arabians of France.

The horses comprising the light draught of the United Kingdom and Ireland are of so mixed a product in breeding that it is best to classify them under the generic term of light draught. Obviously where crossing ranges from thorough-bred to heavy draught the result is varied, and in selection for different purposes "type" more than breed or race is followed. In our Army at Home we have type L. D. 1. for Artillery with the sub-classifications of leaders, centres, and wheelers, the latter being sturdier and stouter than the two former, and L. D. 2 for Transport.

Unquestionably the pre-war "Gunner" type of draught horse, whether bred in England or Ireland, proved the best light draught horse which took part in the War. The sturdy blocky horses with stout round quarters which our Remount Service at Home was accustomed to buy before the War, have always been famous, and are quite typical of our Artillery. They have no demerits, and cannot be beaten in any country or Army in the World.

They are, however, run very close by the Australian horses of our Horse and Field Artillery in India, in fact, there are many impartial judges in our Royal Artillery, who would give the palm to the Australian horse, particularly in the Horse Artillery class,



which is proverbially excellent in quality and substance. I can call to mind a good many Horse Artillery Leaders of Australian origin who would have given a good account of themselves over a steeple chase course, and who would have proved gold mines if they had not joined the Army.

I have already alluded to the serviceability of Australian horses with the Australian Corps in France. Others served in the Egyptian and Mesopotamian Expeditionary Forces, and their good record is undoubted. Australia is particularly good in this class of horse, and I am certain that a very strong reason for this is the annual steady demand which India can give for its Army. A satisfactory feature also of Australian horses is that they are essentially of English extraction, Clydesdales and Thorough-bred strains chiefly entering into their composition. The only drawback as I have previously explained is that for service in a Northern Zone, with reverse seasons to their own, they require a certain amount of acclimatisation. Shipments direct from Australia to France were tried in the early days of the War, but as will be readily realized the long sea journey in addition to service in a country of reverse seasons militated against immediate issue successfully. Under such circumstances the best course is to hold them in India for acclimatisation. I need not say that this is fully known and appreciated.

India is not in a position to breed horses of a light draught type suitable for Artillery purposes. Its climate is hot and enervating and it lacks the green grass of pastures essential for the growth of young stock. An attempt was made some years ago by the introduction of Norfolk Trotters to increase the size and substance of animals, which with Arab crossing might produce remounts suitable for Artillery purposes, but the result was a failure. Much controversy on the subject ensued, but the crux of the matter lay in the unsuitability of the country to raise anything but light Cavalry horses and of the pony class. Yet in a good grass country like Australia, Norfolk Trotter crosses with Thoroughbreds have produced very good Artillery horses of the Horse Artillery class and chargers. The progenitor of the Turanville

Stud New South Wales (Brand D. R. Mr. Thomas Cook) was a splendid Norfolk Trotter by name "Flying Shales". His successor was "Warwick Shales" out of a thorough-bred mare by "Warwick". Their stock put to thoroughbred stallions of good strains have produced numbers of remounts for our Horse Artillery in India. The Anglo-Normands and Postier Bretons of the French Artillery are of mixed Norfolk Trotter blood. The merit and suitability of any particular breed therefore greatly depends on the country of production, and it is equally true of all animals whether draught or saddle.

The original Canadian Divisions brought over to France some very useful horses of Canadian extraction and they did well. They were mixed strains of English, Continental and American horses. Canada maintains its Clydesdale and Shire Horse Societies as in England, but with the growth of the country in recent years, particularly in the West, Canada has imported from her Southern neighbour for agricultural purposes. However, the ground-work of Canadian horses is our best English stock. Many of the London General and other Omnibus Companies and general utility horses shipped from England to South Africa during the South African War, and which were universally well reported on for their endurance, were Canadian horses, and Canada has always shewn a desire for custom in the supply of our Home Army. The prairies of the West are excellent for the production of good stock for Army purposes, both draught and saddle. Our Remount purchase system abroad at the beginning of the late War was based on Canada, Reception Depots at approved centres being arranged, Ports for embarkation earmarked, and Purchasing Depots or Centres contiguous to the Canadian Pacific Railway forming part of the general scheme. A rather remarkable and interesting fact, shewing how easily horse breeding is influenced by circumstances, was that in the early eighties when bicycles of the pneumatic type took so strong a hold on people's minds, it was strongly considered that the days of horses, at least those of pleasure and of a rid-

ing class, were numbered, and in the practical Western World down went their production. I may at the same time mention that Mr. Dunlop, the inventor and originator of the pneumatic tyre which bears his name, and whose photograph is to be seen so prominently in advertisements, is a Veterinary Surgeon, and whose delight in discussion on horse politics is not in any way diminished by the importance of his discovery or by his retirement from the active domain of his profession.

Wastage in the light draught classes of horses during the late War was, however, chiefly met by importations direct from the United States of America, where the greatest field of purchase lay. This was particularly so at least when the United States herself entered into the conflict. No other country in the World is so richly endowed with horses, and in this class of horse especially. Her resources are remarkable, and the aid which she could afford to the Allied Powers in the command of the most useful animals of the World was a prominent factor in the downfall of the enemy.

Into the composition of the eighteen millions horses with which the United States of America is credited, and taking them as a whole, there enters by crossment, recrossment and by special selection, nearly every known breed or species of European horse, including the original Spanish stock implanted in the South in the seventeenth century, the English well bred importations of Kentucky, horses from the Netherlands to New Amsterdam originally. Canadians of French origin in early times, Clydesdales, Shires, Suffolk Punches, English Thoroughbreds, Hackneys, Bretons, Belgians, Oldenburgs, and more recently and in considerable numbers, the Percherons. Certain breeds have been specialised, notably the "Standard Bred" trotter, the progenitor of which was an English thorough-bred by name "Messenger" though the more immediate pater familias was a horse named "Rysdyks Hambletonian", foaled in 1849, and reputed to be the father of 1300 foals. As in other countries the United States maintains its Horse Breeding Associations with their Stud Books, as for instance, "The American Clydesdale Association" at

Chicago, "the American Percheron Horse Society", the "American Saddle Horse Breeders Association" etc. I mention the above to show as briefly as I can what the generality of American horses are like, as for replacement of casualties they came very prominently into the War, both the British and French Governments having purchased large numbers.

Provided our British ideas as to type of light draught horses suitable for Artillery and other draught Army purposes are strictly adhered to, that is to say, if animals are compact, with good stout backs and quarters, the American horse will shew as good a record in War as any other. He had already proved his merit as a general utility horse in peace time. His shoulder is, as a rule, very good. And in a matter of backs and quarters in purchasing, perhaps I may be permitted by way of divergence, to relate two little circumstances of an instructive nature. An old Artillery friend with whom I was associated for two years in the purchase of Australian remounts in Calcutta never once omitted to stand up to the horse's shoulder and look over his back as to breadth and stoutness. It was his strong point in purchase. The horses of one particular shipper invariably had stout round quarters. His animals could be picked out quite easily without referring to his distinctive brand. The shipper was born and brought up amongst horses in England, and stout quarters were for ever duly impressed on his retina.

However, it was our experience in France that a large number of American bred horses were leggy and long in the back, and this category is opposed to the severe conditions of War, particularly under circumstances of wet and mud. It is forcibly brought home to us by a visit to a War Veterinary Hospital. When light draught horses have to be used at times for pack purposes, with oscillating loads, the necessity for compactness, for stout backs and quarters, is even more important. Of course in a great war where demand is so heavy, it is very often a case of getting what you can, or purchasing as near specifications as supply or resources permit, but even "border-liners"

fail in the offing. Moreover, adding to demerit, are the factors of more or less sudden transplantation for hard work into a foreign country, and the partially trained and soft conditions of animals rapidly got together to meet wastage. It is really piling wastage on wastage, but difficult or well-nigh impossible to avoid in a great war such as we have lately experienced.

Argentine horses, so far as British Expeditionary Forces were concerned, came little into prominence as draught horses during the War. Purchases were, however, made by the French and Belgian Governments. For the most part they are of the riding type, and I shall remark on them more fully under that heading. Speaking generally of Argentine horses, they may be divided into two classes, viz. the Crillio or native bred, height from 13 hands to 14.3, and by far the most numerous (approximately 4,000,000 out of a total horse population of 4,500,000), and the Mestizo or crossed bred. The Mestizo is the result of the foreign stallion on Crillio mares, and the main reason for the introduction of foreign blood was the desire for horses suitable for carriage work. When I visited the country in 1898, the *haut monde* of Buenos Aires rejoiced in their turn outs, and a first class horse was worth as much there as in Europe. Imported stock included English thoroughbreds, Hunters, Hackneys, Anglo-Normans, Arabs, Morgans from the United States, Trakehners, Oldenburghs, Hanoverians, Orloffs, Percherons, Clydesdales, Shires, Cleveland Bays and Suffolk Punches. The foregoing will give an idea of the composition of Argentine horses, and it will further shew that from a suitable artillery draught point of view the field of supply is some-what limited. I remember the difficulty experienced by the British Remount Commission purchasing for South Africa in 1898 in obtaining suitable horses for Artillery. One hundred and twenty were at last selected, and they were fairly good specimens showing Clydesdale, Cleveland Bay, and Percheron strains.

A great drawback to the Argentine horse as a war animal, and particularly for the more or less immediate purposes of war, is that he is "grass fed". As a rule he knows little about grain, his chief diet being the beautiful alfalfa which grows so profusely

in the Argentine either under cultivation as a hay crop, or forming a considerable part of the herbage of pastures. He misses the latter greatly when taken to other countries, and his introduction to manger foods, and particularly the use of a nosebag, is often a gradual process of coaxing. One can quite understand softness and a falling away in condition under such circumstances, and which really sums up our experience of the Argentine horse generally in war.

Though the present article is intended to deal only with animals employed by our own Armies, I may be excused brief mention of some of the races and types of light draught horses of our Allies in France. The Petit Percheron or Postier Pereheron, the French tramway horse of former days, is a hardy, sturdy animal, and I should like to see a few selected teams of this strain in the hands of our Artillery horse-masters. I am confident they would give great satisfaction for strength and endurance.

The Postier Breton, with his touch of Norfolk blood, is a great favourite in French Artillery.

The Ardennes horse has also a great reputation as an Artillery horse, not only in France, but in Belgium, Germany, and even in Russia. He is a hard, stout, short little animal, perhaps to our English idea somewhat "jumped-up", to use a horsey phrase, and in some districts one appears to see in him a trace of Arab blood, which I understand was introduced in 1810 by Napoleon.

### **HACKNEYS.**

The British Expeditionary Force was specially asked to include in its report an account of the merits or otherwise of animals shewing Hackney blood. In no race or English breed is prejudice so strongly shown, and such prejudice is chiefly in relation to his utility as a riding horse. He is essentially a light roadster, a horse of fashion and pleasure for light carriage work where his high stepping action and powers at the trot, which

form his chief characteristics, can be displayed to the best advantage. As pure blood, war is not his metier unless it bears relation to an officer's mess cart or other light draught duty, or the credit of the country is required to be upheld at a horse-show. It was generally reported from the Front in France that animals of hackney blood had no special merit as military animals, the chief fault being lack of stamina. Comparatively few pure bred hackneys or animals shewing much hackney blood passed through Veterinary Hospitals in the British Expeditionary Force, France, which was an indication that relatively few animals of this class (i.e. pure or predominance of hackney blood) participated in the War. It was further stated that though there were individual instances of horses of predominant hackney blood which proved useful riding horses for ordinary work, they would fail in fast work.

Nevertheless as I have several times remarked in the course of this article, Hackney or Norfolk Trotter blood enters to a considerable extent into their composition of the light draught horses of various countries with marked success, and I think therefore their chief merit lies in suitability for cross mating in the production of horses adaptable for light draught purposes, whether for general utility or for the Army. A good many of our small Cart-horses have a dash of hackney blood, and the activity, stoutness and hardiness of these have been greatly commended.

### **RIDING HORSES.**

"Nevertheless it is generally agreed that the horse, not the Cavalryman, did dominate war during many centuries, for it was the use made of the horse, with a rider, that often lent decisive power. It may surely be claimed therefore that it was the horse, not the "moral threat" that proved the most powerful weapon of Cavalry even as recently as the Campaign of 1918 in Palestine".

I am exceedingly glad to read the above from the able pen of Major General W. D. Bird, C. B., C. M. G., D. S. O., in his Article "Years versus Ideas" published in the Cavalry Journal of July 1920 apropos of a question of Tanks in replacement of Cavalry.

The days of Cavalry in our Army are no more numbered by the threat of Tanks than they were affected by the introduction of bicycles or the use of aeroplanes. One War is no criterion of the next or another. It is nature, of flesh and blood, that forms the prime factor of War: all else are appliances whereby it can be most successfully waged. Man is the element, the animal is his co-efficient, and armament is his determinator. It is certain that War will never be conducted without animals, both from the essential and economic aspects of it. It is the same now as it was 2500 years ago, and there is little reason to suppose that the future will disclose any material change excepting in armaments, and until, through the latter, War altogether is made impossible. We will therefore continue to discuss our co-efficient or our business partner in War.

It is extraordinary how meagre history of War is in respect to the part played by animals. Historians are more concerned with tactical problems and the lessons to be derived therefrom, than to the actual pawns that are used in the game. For instance, I have searched through many books to extract information with regard to draught horses in War, but with very poor success. The achievements of Cavalry are more fully recorded, but mention is in general terms only as a rule, and insufficient to point to special merit or otherwise of the animals concerned.

Our Field Service Regulations and Systems however, now include War Diaries and the submission of Departmental and Technical Reports and Returns, and it is possible thereby to collect a reasonably accurate account of the doings of all animals, of mortality and inefficiency experienced, and to draw conclusions therefrom. One's own personal experience also must necessarily be brought to account.

Nothing has ever equalled our Irish horses for Cavalry work. They are a class by themselves, and we are fortunate in having so favourable a country as Ireland for the production of light horses. It is hoped that the industry of light horse breeding in that country will be encouraged in every way. It is really an advantage that purchasers from other countries and armies go



there for horses. It encourages production and it shews the esteem in which Irish bred horses are held.

Cavalry, and particularly in respect to the *Arme Blanche*, unfortunately did not take so prominent a part in France as in previous wars or as in Palestine, but the merit of our Cavalry horses cannot be gainsaid. They leave nothing to be desired. It was extraordinary how well those advanced in years, and even old, stood the campaign, and the old rule of excluding animals over twelve years of age for war has been exploded. The limit of age is determined by the animal's physical ability, and it is sufficient for the animal to show it. For riding purposes, and particularly for fast Cavalry work, the thorough-bred sire is essential, whatever the foundation stock is, and where Debility and Exhaustion is the chief cause of inefficiency and wastage, it goes without saying that the stout, compact, robust animal, with good back and loin, is the type required. Wastage in Cavalry during the war in France was much less from lameness than from the Debility and poor condition associated with the adverse circumstances obtaining.

And apropos of the purchase of Irish horses for Cavalry and riding purposes I should like to refer to the old cry that the foreigners were taking the best mares out of the country, and which from my experience of remount purchasing in that country I, personally, considered very much of a bogey cry. It may not be generally known that 75% of Cavalry troop horses are mares. Why? Because, apart from the fact that equine population comprises more females than males, the small animal of any species is usually the female, and in the case of purchase of troopers for Cavalry or riding animals where specifications of height and price are relatively low, mares form the bulk purchased. The geldings, which are usually the bigger animals, are sold as hunters, chargers, etc. at a much greater price, and if a catalogue of the Royal Dublin Horse Show is scrutinized it will be found that the majority of the exhibits in the hunter classes are geldings, the *creme de la creme* of production.

It is also interesting to relate that the majority of hansom-cab animals in London and other towns in days gone by were

mares, the reason being that they were smaller and cheaper than geldings, they were quicker and safer on their legs in rounding corners, and moreover they could be trained to hansom-cab work six weeks earlier than geldings.

A very simple classification of riding horses adopted by our Remount Service at Home is R. 1. for Cavalry and, R. 2 for other riding purposes. Conditions of Service or work being so dissimilar in these two classifications, obviously the animal which may be suitable in the latter class would not always meet the necessary desiderata of the former. Ability to carry weight and to maintain power and energy under such weight over a more or less prolonged period is the essential factor of a Cavalry trooper. The weight which an ordinary Cavalry Troop horse must carry is at least 18 stones, comprising the rider (say average weight 10 st. 10 lbs), saddlery, arms, accoutrements, ammunition, clothing, necessities, rations and water. To meet requirements a certain degree of height is necessary, and above all, stoutness, robustness, and fitness are indispensable, especially when the country to be traversed is heavy with mud and mire. There are very few of our best hunters that have the merit of carrying 15 stones. The average height of our British Cavalry troop horses is about 15. 1. Personally I think that height, except in special instances, should not exceed 15. 2, for the reason that adequacy of ration plays so great a part in War.

The history of Cavalry in war from very early times when it formed the chief arm and certainly the most popular one, the many changes of its function and employment as necessitated by armament, and the great influence which Cavalry and Mounted Men-at-Arms has had on the breeding of horses in the United Kingdom and the Continent of Europe generally is most entertaining, and were it not too long a subject and perhaps beyond the scope of the present article, it would have been interesting to have recounted the achievements or otherwise of animals which as Major-General Bird says lent such decisive power in battle.

In speaking of the merits or otherwise of the Cavalry horse one must not forget the man. Courage and endurance in the one

must find like attributes in the other, and if success is to be achieved, the man must be a good horse-man and a good rider, in other words they must be one machine or implement of war suitably combined for offensive, which is the real essence or function of Cavalry. The success of Cavalry of ancient days, of Alexander the Great, of Hannibal, of Cromwell, of Gustavus Adolphus, of Frederick the Great, Marlborough, Napoleon and right down to the present day, is in a large measure due to this factor of combination, and so it will be as long as Cavalry exists. Hence it is that our Army Authorities attach so much importance to our equitation schools, and the regimental training of man and horse together. Note as against this the most unsuitable combination of man and horse in the Feudal times where both were so heavily encased in armour that they could not possibly move out of a walk, where the knight though trained from his youth up in the use of arms and most proficient in them, yet was often so indifferent a horse-man and so heavy with armour that he had to be tied to his mount. Monstrelet writing in 1416 remarks on the "astonishment which certain Italians created amongst French Men-at-Arms because they could actually turn their horses at a gallop." (History of the Army by Hon'ble J. Fortescue). And by the same token King Edward III, The Black Prince, and King Henry V. consistently won their battles at Crecy, Poitiers, Agincourt etc. by splitting this unwieldy combination, ordaining that their Men-at-Arms should fight on foot as opposed to the French Men-at-Arms who sat on their horses to suffer discomfiture by the terror and unmanageableness of their mounts, caused by showers of arrows from the English archers. Certainly in those early days the mounts were not very well adapted to carry such heavy weights to achieve success as Cavalry. Spanish horses were the favourites for speed, endurance, and courage, and Edward III got all his remounts from Spain. Each knight had three horses, his first charger being a stallion, the other two being either geldings or mares, the smallest being a palfrey which he rode until the danger point, when he was equipped by his squire and mounted his first charger.

The story of battles in which Knights and Men-at-arms took part is not complete without an allusion to the blind yet exceedingly brave King John of Bohemia at the battle of Crecy. He asked to be led forward into the fray, and his Knights not wishing to lose him, fastened the reins of the horses together, putting him at their head. They fought so valiantly and advanced so far that they were all killed, and were found next morning on the ground with their horses all tied together, a glorious ending to man and beast.

The extreme dearth of good horses was one of the complications of the collapse of the old Feudal Service (Henry VII's time) and it was left to King Henry VIII, by enactments very carefully and rigidly enforced, to lay the foundation stone of our horse breeding in England.

Category R. 2 horses, which I previously mentioned, includes riding animals not required to do the fast work of Cavalry. They are less in height, may include cobs and ponies, and are allotted for riding purposes to Field Companies, Infantry Chargers, Ancillary Services etc. Their work being lighter, as a rule, there are no complaints in respect to them, and provided they are suitable for the riders concerned, and intelligent sympathetic care is bestowed on them, they show a very good record of service. Speaking generally R. 2.'s had little experience of Veterinary Hospitals in France. They were somewhat like the men of Mobile Veterinary Sections inasmuch as they had no use for back areas. Cobs were absolutely conspicuous by their absence from Veterinary Hospitals.

I have briefly alluded to Hackneys as riders. They were not appreciated as such for fast work, but for ordinary quiet riding purposes they and their fellows with predominant hackney blood, were quite satisfactory.

The thoroughbred, or race horse if I may term him, is not, as a rule, a military horse, but price permitting, there are places for even him on necessity, such as light charger duty.

#### AUSTRALIAN RIDING HORSES.

For a large number of years India has depended considerably on Australia and New Zealand not only for British and

Indian Cavalry but for its animals of pleasure, chargers, hacks, polo-ponies, etc. They have very few demerits as military animals when carefully selected as to standard specification. There is plenty of trash in Australia as in other countries, for which probably so much five furlong sprint racing is to a great extent responsible, but when India has the call on importers who know Army requirements perfectly, there ought to be few misfits or unsuitable horses where Indian Remounting is concerned. The ground work as I have previously remarked is English stock, and the country is remarkably adapted to the raising of animals of good substance and strength. At one time nearly all British Cavalry Regiments in India were mounted on Australian horses (the term "Waler" was a common expression) and they were classed as Medium Cavalry. Now a days British Cavalry is considerably mounted on Country breeds, by English Thorough-bred, Australian, and Arab sires on Country Stock. The majority of Indian Cavalry Regiments under the Silladar System, and particularly if they are garrisoned within reasonable distance from Calcutta, Madras, or Bombay, where Australian horses are landed, and rail charges thereby moderate, have for many years purchased small, somewhat inferior, and cheap Australian horses in preference to Country-breds. These animals rejoice in the name of "Bounders," which perhaps sufficiently explains their quality, and the cost price up to recent years was Rs. 350 as against the better class of horse for British Cavalry at approximately Rs. 800, and as against the Silladar Indian Country-bred at Rs. 250. These so called "Bounders," many of which are excellent small animals, are much appreciated by Silladar Cavalry units, not only for their ability to bring a little grist to the mill of the Chanda Fund by an occasional sale of a made pair to the Commissioner or other notability, but for their generally satisfactory service as light troop horses and their superiority over the country-bred of Rs. 250 value. Their war record on the frontiers of India, with the Indian Cavalry Corps in France, and in Palestine, clearly proves their merit and usefulness for Indian Cavalry-men

who are not as heavy as the British Soldier, though the Sowar went up in weight considerably in France. Their value as trained troop horses was also appreciated by the Indian Cavalry Corps in France, who specially asked that arrangements might be made whereby units could get their own horses back after treatment in Veterinary Hospitals, which could easily be effected by Remount Service as the animals were branded with the regimental designation.

Australian horses are all branded, and it is comparatively easy to tell the part of the Commonwealth from which they come. The largest number of military horses that I see in India at present hail from Queensland. Importers also have their own brands, placed under the saddle, and the merits or otherwise of the importers purchases can therefore be duly observed.

New Zealand horses are much more like English horses in appearance than Australians, and they are unbranded.

It was unfortunate and regrettable that the Australian horses sent to South Africa during the Boer War of 1899-02 were badly reported on. The reason was that shipments were not typical of what Australia could produce as their real or most suitable war horses. Most of the animals required during that war were for mounted infantry purposes. Small horses of the cobby type were asked for. Such animals did not exist, at least not to any appreciable extent. There were "brumbies, "bounders" and small weedy thorough-breds, the result of breeding for speed in five furlong racing, a veritable curse in the horse breeding of any country, and one can quite understand the disappointment of Australian shipments of this class and the bad report which followed. Moreover during the war the wastage was so severe that importations were practically sent straight up the line and never had a chance of showing any merit.

However the account is now squared. The Australian riding horse at war in the various theatres during the past six years, whether in France, Egypt, Palestine, Mesopotamia, East Africa, or on the Frontiers of India, has not only travelled further than any other animal, but he has held his own against all

comers. The best of them are superb, the second-raters have acquitted themselves with distinction.

#### ARGENTINE RIDING HORSES.

Under the heading of light draught horses I mentioned that the majority of horses in the Argentine are riding horses. In the main they are Crillio or native bred, height from 13-3 to 14-3, and only suitable for mounted infantry and light cavalry. Others are crossed Crillio mares with European stallions and are larger, but these are limited in number. The Crillio small horse or pony, (a gelding, the mares not being used) is a wonderful animal in his own country. He will canter along for 80 miles in a day with comparative ease, carrying a huge saddle or recado weighing over 60 lbs. weight, and he turns out to be a remarkably good polo pony. Yet no name was bad enough for him in South Africa during the Boer War, in fact, his purchase was absolutely stopped. In common with others he shared the fate of being drafted into work immediately after landing. He above all other animals requires time to acquire military ways. He is a very home sick animal, sadly misses the friends of his tropilla, grieves and sulks for days, and in the process of breaking in he often has had the stuffing knocked out of him. He is grass-fed in his own country, and one cannot expect anything but disaster to overtake an animal so fed and invited to eat grain which he has not been accustomed to, and out of a nosebag the like of which he has never before seen. The iron enters into his soul, his soft spirit is broken, and he gives up the ghost. Such is hardly his fault, but at the same time, his appearance, with his blazed face and his white legs, is indicative of a softness of constitution which is not in keeping with the requirements of a war animal.

The Hungarian being also a grass fed animal failed in like manner in South Africa. Moreover Hungarian peasants do not ride, their animals as a rule being yoked together as a pair in a light four-wheeled vehicle.

#### ARABS.

I have no great liking for Arabs for Cavalry, at least for British Cavalry in India. I am always reminded of the occasion of

casting about thirty of them for sprained tendons and ligaments at an annual veterinary inspection of the 15th Hussars at Muttra in 1907. They were mostly young animals. The men were too heavy for them in training. It was rather a surprise to me, for Arabs, though really ponies, are virtually miniature horses stunted by reason of the country of their birth, and their beautiful make and shape is altogether in favour of carrying weight. It is no uncommon sight to see Arab polo ponies moving like clock work under heavy owners on the polo field. But as long as the Arab horse up to 14. 2. commands the present very high price as a racing animal or even a lesser price as a polo pony, he will not bulk very largely as a military troop horse. His endurance, and particularly in arid regions, is phenomenal, and his prepotancy as a Sire remarkable. Old history of war is full of his achievements, and he left more than foot prints in the sands wherever his incursions and excursions took him. I specially use the masculine gender in his description because Arab mares are not permitted to leave the country of their origin, and "himself" for the most part has to be "altered" in a little matter on joining His Majesty's Forces which makes him more amenable to discipline and altogether a better soldier.

Included in this breed is the Syrian horse or pony which has performed such marvellous work in Cavalry in Egypt in days gone by. He has a wonderful constitution and is admirably adapted to warfare in Eastern climes. An example of endurance under trying conditions of paucity of rations and lack of water is recorded in the annals of the Nile Expedition of 1884-1885 for the Relief of Khartoum, where Arab Stallions, average height 14 hands, average age 8 to 9 years, purchased by the Egyptian Government in Syria and Lower Egypt for Egyptian Cavalry and delivered over to the 19th Hussars, performed one of the most remarkable feats possible to relate. The following is a brief history of their achievement. In June 1884 they were taken by barges from Cairo to Assouan where they remained for three months. In September they were marched 210 miles to Wady.



Halfa and 350 of them were handed over to the 19th Hussars. This regiment then marched by squadrons to Korti 360 miles at an average daily march of 16 miles, the daily ration being 6 lbs. grain and 10 lbs. dhourra stalk. They arrived in good marching condition. They stayed at Korti from 20th December to 7th January 1885, received 8 lbs. green Dhourra stalk instead of dry stalk and they improved during the halt. 155 were then detailed for the Desert Column moving via Gakdul Wells to Matammeh. On 30th December 40 horses proceeded to Gakdul 100 miles, accomplishing the distance in 63 hours. They rested there 15 hours and did the return journey of 100 miles again in 63 hours, Six of them accomplished the return journey in 46 hours, and the last 50 miles in  $7\frac{1}{2}$  hours. There were no casualties. The 155 horses, including the 40 above mentioned, then proceeded on the 8th January across the Bayuda Desert with General Sir Herbert Stewart's Column, and up to the 20th January exclusive of one day's halt at Gakdul, their career was one of 31 miles per day with an average of 5 to 6 lbs. of grain and 2 gallons of water daily. They were allowed to graze on every possible occasion, but the grass of the Bayuda Desert is very dry, and they ate little. At times they got mouldy biscuits unfit for issue to the men. When the first advance on Matammeh was made, they marched to the Nile without having received a drop of water for 55 hours and only one pound of grain. Some 15 or 20 horses received no water for 70 hours. From 20th January to 14th February they halted at Gubat, receiving no grain, but a ration of 10 lbs. dry Dhourra stalk or 12 lbs. of green bean stalk daily. Two days before their return journey they received 6 lbs. grain daily. The first 75 miles of the return journey was performed on 4 lbs. grain and 3 gallons of water, after which water was stated to be plentiful, and 8 lbs. grain daily ration was supplied. During the period 8th January to 8th March, on which date they returned to Korti, the casualties were 20 killed in action, 19 died or destroyed from Debility and Exhaustion, and 5 died or destroyed from other causes. The weight carried was reduced to a minimum, but averaged about 14 stones.

**AMERICAN RIDING HORSES.**

During the South African War 107,511 horses were purchased in the United States by the British Government. They were mostly small, from 14.2 to 15.1, and the majority were for Mounted Infantry purposes, though larger ones for Cavalry were at first selected. I am not acquainted with the number purchased for Cavalry during the late War, but I imagine that it cannot have reached a high figure as requirements for Cavalry were comparatively few and could be met more or less from home sources. Moreover, American riding horses do not altogether fill the eye of our Cavalry purchasers. The Irish and English standard Cavalry trooper is a difficult one to compete with. To our minds the American saddle horse is more of the light harness type, and one can understand this with the amount of standard-bred trotter blood in the country, and the preference in country districts to drive in a buggy than to ride. All the same the small horses purchased by the British Government during the South African War, many of which were range horses from Wyoming, Montana, Idaho, Oregon, and from Texas, were good hardy animals, suitable for the purpose required, and they were well reported on in South Africa. The standard of our purchases, I may say, did not quite meet the approval of General Carter, then Adjutant General of the U. S. Army, a great lover and judge of horses and who used to pay occasional visits to our Remount Commission. They were not his idea of saddle horses, but what was really passing through his mind was the better and more expensive type suitable for Cavalry and Special Riding, two categories purchased by the American Government for Army purposes.

Under the American Saddle Horse Breeders Association great endeavours are made to maintain an American Saddle horse as a type. The progenitor of this strain was a through-bred Stallion named "Denmark" foaled in 1839, and brought to Kentucky. During the Civil War, stock of this Kentucky strain performed most wonderful marches. Starting on his first raid on the 4th July 1862 from Knoxville and returning to Livingston

on the 28th July, Major-General J. H. Morgan with his Cavalry covered 1000 miles, capturing seventeen towns and destroying all the Government stores. In July 1863 in his Ohio raid he marched from Summerville Indiana to Williamsburg east of Cincinnati, 94 miles in 35 hours. General J. E. B. Stuart, another brilliant Southern Cavalry Commander, with 1800 Cavalry and 4 pieces of Horse Artillery, made a rapid sweeping reconnaissance round the Northern Army, covering a distance of some 20 miles from Chambersburg to Leesburg in 36 hours. Forrest's expeditions, Grierson's operations in Mississippi, Wilson's invasions and Sheridan's turning movements and pursuits are all reminiscent of the wonderful prowess of American horses of Cavalry of those days. Whether the present day American horses with their greater admixture of trotting blood can achieve such results it is difficult to say.

#### INDIAN COUNTRY BREDS.

On the abolition of the old Stud Department, horse-breeding operations were commenced in India, and they continue to be controlled by the Remount Department of the Indian Army. The primary object of these operations was the production of horses of sufficient size and substance to meet the requirements of the Army in India, not only in Cavalry, but in Artillery, and to render that Army independent of foreign markets. Such object has not been fulfilled in respect to Artillery for reasons previously explained, but operations have progressed with regard to the production of horses suitable for Cavalry, and in the grading up of light horses and ponies of the country generally. English and Australian thoroughbreds and Arabs are imported or purchased in India for service in the Horse-breeding Circles of the Punjab, United Provinces, and Baluchistan. The Government has a call on the young stock produced, purchases of young stock at about 18 months being made and sent to young stock depots for care, suitable feeding etc. until such time as they are of sufficient age to be issued as remounts. The Government under-

takes also to raise and improve the best Indian strains of original pure Indian stock, viz. Marwari and Khattiawar breeds, for service and distribution in provincial districts. A limited number of Arabs are also raised for the same purpose. Race meetings, with valuable prizes for Country bred, are held at various stations, and tend to give a fillup to production on good lines and towards more valuable animals.

The Indian bred horses which went to France with the Indian Cavalry Divisions consisted of (a) those belonging to Silladar regiments and Imperial Service Troops, and (b) those belonging to British Cavalry units, the latter being the best of their kind. The specifications in height of Indian Cavalry horses are 14.2 to 15.1, and of British Cavalry 14.3 to 15.2.

A large number of the horses of the Indian (Silladar) Cavalry and Imperial Service Troops were weedy, undersized animals, unsuitable for Cavalry Service in France. Many were also unsound, never got beyond Marseilles, and had to be cast. Under a Silladar system one cannot expect a very high class trooper, but for light Indian Cavalry and service in his own country, and in the East, the Indian Country bred justifies his comparative small cost.

With the greater outlay in respect to the mounting of British Cavalry units, one naturally looks for something superlative, and it is questionable whether the necessary degree of excellence and suitability has been attained, at least to an extent justified by the outlay. Though the 17th Lancers reported highly on their animals in France, speaking generally as a class and including both British and Indian Cavalry, I am distinctly of opinion that the Indian Country bred is not up to sufficient weight for service in a European country where heavy going is the rule. So many are weedy, leggy, and split up, and moreover are excitable. A considerable number were evacuated for Debility and showed a low standard of recuperative power. One Veterinary Hospital reported that the Indian Country bred was defective in his feet, and that in this Class a high percentage of Navicular Disease existed.

However as the Indian Cavalry Divisions left France for service in Palestine, and Indian Cavalry Brigades took part in the Mesopotamian Expeditionary Force, where horses had a more favourable scope for real Cavalry Service, it is to those theatres that report as to the merits of the Indian Country-breds, and particularly of those better class of animals on the strength of British Cavalry units, should prove most valuable. I have no special information to form an opinion, but the glorious achievements of the Cavalry Arm in Palestine would certainly indicate that they had proved their merit and value up to the hilt. For instance the 10th Cavalry Brigade of the 4th Indian Cavalry Division in Palestine accomplished a distance of 70 miles from Selmeh orange groves to Beisan in 35 hours including halts and delays. The horses of despatch riders, patrols, and many officers covered even 80 miles on that occasion. The total casualties evacuated to the Mobile Veterinary Section at the end of the period were only 15, and this after a month in the Jordan Valley and night marches aggregating 65 miles to the point of concentration. It is a performance which leaves no doubt as to the merit and fitness of animals.

It is very important in view of Horse-breeding Operations in India that a more precise account of the better class of Country breds on the strength of British Cavalry Regiments in War should be furnished, and a relative comparison drawn between them and those imported from Australia. No doubt in course of time this will be done. It is not definitely known how many actually participated in War, but the following table shews the number present with British units immediately prior to departure overseas:—

Name of regiment.	Theatre of Operations.	Number of each breed.		
		Austra- lian.	Country bred.	Arab.
1st Dragoon Guards ...	France.	157	392	-
7th Dragoon Guards ...	"	535	-	-
6th Iniskilling Dragoons ...	"	478	53	-
7th Hussars ...	Mespot.	486	155	-
8th Hussars ...	France.	12	20	482
13th Hussars ...	"	201	357	-
14th Hussars ...	Mespot.	373	171	-
17th Lancers ...	France.	220	332	-
Total.....		2,462	1,480	482

Since my return to India I have seen a good many Country bred Infantry officers' chargers, 14.1 to 14.3, both at the Front in Frontier Expeditions, and amongst those proceeding overseas to Mesopotamia as remounts, and without question they are of real merit.

### MULES.

In animal kind the hero of the late World's War, as in all other wars in which he has participated, that paragon of excellence, the mule, finds the premier place. He stands out prominently as a first class war animal, and under all circumstances, in all climates or situations, whether amongst the mud of France, in the deserts of Egypt, on the plains of India, or on the hill tops of the Himalayas, in burning heat or icy snow, his achievements have been marvellous. He is as indispensable to War as a Commander of the Forces, and no history of war is complete without him. Any demerits he may possess are attributable to a psychology peculiarly his own, but his merits are double distilled, and little more remains to be said on that account.

There are, however, so many different breeds, types, and sizes of mules, and the military uses to which they are put are so varied, that it is necessary to dilate on them severally.

Specifications as to height and substance vary according to the theatre of war and for the purpose required, but under British requirements the following standards were commonly adopted during the War;—

Heavy Draught Mules... Up to 16.2 or even 16.3.

Weight about 1300 lbs.

Light Draught Mules... 15.0 to 15.3-Weight about 1100 lbs.

Pack Transport ... 14.1 to 15.0.

Indian specifications are somewhat different to the above and are roughly as follows:—

Light Draught Mules... Same as light draught horses.

Ordnance Mules (Mountain

Artillery ) ... 13.2 to 14.1

Equipment Mules ... 13.0 to 14.0

Transport, draught and pack ... 12.1 to 13.3

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#### AMERICAN MULES.

Of all countries in the World, none can surpass the United States of America for the production of Mules, nor compete with it in general resources. The mule population of the States amounts to nearly 3,000,000, and the fountain never seems to run dry. During the South African War, the British Government purchased 80,524, and though I have no actual figures to guide me, I should say purchases during the late War amounted to considerably over a quarter of a million. The strength of mules in the British Expeditionary Force France alone, amounted to roughly 90,000.

All sorts and sizes of mules are bred in the United States, from the small miner 12.3 or 13.0 to the magnificent sugar mule 16.2 and over. It pays better to breed a mule than a horse, and the market is for mining, lumber trade, and the cotton and sugar industries of the South. The real home of the American mule, and especially the large mule, is Missouri, though lighter mules are raised in Texas. If the magic names of Lathrop Missouri, and Kansas City, are whispered into the long ear of an American mule, he will immediately start a conversation about his old home, blue grass, Indian corn shucks and stover, his fine big mother, his French and Spanish ancestry on his father's

side, and he will air his views on stock-yards and "niggers" generally. The American mule is wonderfully docile, and to my mind quite the most handsome creature of the genus *Equidae*, and loveable withal. His power is best appreciated by standing close up to him: at a distance he may look mean. As a rider, a mule is of little value, a supreme will and an iron mouth, as a rule, proving the drawback. Mr. Malcolm Moncrieffe of Wyoming, through whom we purchased a large number of horses during the Boer War, used to hunt a St. Louis mule in England. He was not equal to taking a line of his own, but he followed a lead all right. Mr. Moncrieffe's only objection was that he never could talk to his friends, as the aristocratic hunter was wont to turn up his nose and snort at the plebeian and curious hybrid. The foreman of a depot in the United States, speaking of a 14 hand mule "Jack" which I sometimes rode, said to me on one occasion:—"That mule will give you a fall some day: I have never known a mule that didn't give a man a fall sometime." "Jack" put me into a barbed wire fence most perfectly. He could round up stock and gallop like smoke in the company of horses, but by himself he lapsed into mulish ways, Vain as a peacock, with his tail trimmed in the American fashion, a white polo lock on his mane which he knew he possessed, full of spirits and with affection like that of a dog, crying his heart out in the corner of a corral when the time came for his shipment to South Africa, summed up the nature of that handsome little fellow, and of mules in general. Their happy nature goes a long way towards their success. They have a habit of worming their way into the hearts of our soldiers and very soon friendly relations are established that work for the common good. Their endurance, their comparative freedom from sickness, their pluck and stout-heartedness when properly treated, their ability to perform work under adverse circumstances and when short commons are necessitated, are their usual attributes, and their employment in War is a great economic factor. These remarks stand for all mules whether they are American or otherwise.



The majority of American mules employed in the various theatres of war were for light draught purposes, supplying the place of light draught horses in Ammunition Columns etc. of Formations, and receiving the same rations as light draught horses. To the latter factor the superiority of the mule over the light draught horse is greatly ascribed. If well fed, he thrives on work, and in times of idleness he will quickly get fat. As an instance of ability to stand the vicissitudes of campaign, I will quote again the Somme Operations in 1916. This offensive period resulted in 16074 Debility (poor condition) cases evacuated to Veterinary Hospitals on Lines of Communication, of which total only 404 were mules. The percentage of inefficiency was 4.42 for horses and .61 for mules, horses suffering therefore 7 times more than mules. During the winter season they gave us three times less trouble than horses from skin disease, and Respiratory disease was practically nil. These are very strong arguments in favour of the mule. I call to mind the limbered General Service Wagon mules of the 17th Lancers going through the streets of Abbeville on a snowy day. They were pictures of health, and the bloom of their coats shone in spite of the snow. It is only one instance of many, and it made one feel proud to belong to our Army.

The pack mules of Infantry and Signals, smaller in height, were also very good, Cavalry for their Machine guns, by reason of more rapid movement, have pack horses.

#### MOUNTAIN ARTILLERY OF INDIA.

The mules of Mountain Artillery in India, both British and Indian Batteries, deserve a special mention. They seldom ail anything, and of all units in the Indian Army they give the least trouble to Veterinary Service both in Peace and War. They are of a superior class, sturdy and stout, 13.2 to 14.1, with good straight backs, an essential feature of pack mules. They are household words in a matter of condition and fitness, and they have the further merit of being unshod for the reason that they are all the more able to get better foot-hold in ascending the mountains. They are a cosmopolitan assembly with members hailing from the United States, Argentine, China, Cyprus, and the Punjab with American

ancestry. I remember the first shipment of North American mules (brand G. H.) purchased at Lathrop Missouri by Major Gough in 1902 from Messrs Guyton and Harrington. They were perfection in mule kind, Mr. Guyton expressly desiring Major Gough to select the very best he could find, to let the Indian Government, as he said, see what the United States and his firm could produce. I daresay some of these original G. H. mules are still in existence. They were very highly appreciated.

#### INDIAN TRANSPORT MULES.

Indian Transport is Pack and Draught, the mules ranging up to 13. 3, the pack load being 160 lbs, and the draught being a load of 10 maunds or 800 lbs. for a pair of mules in an A. T. cart. Mules are either Argentine, Chinese, or Country-bred. The record of the Transport mule of India in War is now remarkably good, inefficiency in recent Frontier expeditions being usually about 2.6 % or 3 %, a much improved state of affairs from campaigns of former days in which sore-backs abounded.

Perhaps the most trying circumstances under which Indian Transport animals have laboured during Indian Expeditions, were those of the Tibet Mission of 1904, and the merit of the mules which took part is well illustrated in the Veterinary Report of that Mission. The Senior Veterinary Officer of the Mission remarked as follows:-

"I cannot speak too highly of the Mule Corps engaged in Tibet. They did rough work daily over snow, ice, etc. and in all sorts of weather, including frost to the extent of 57° degrees. There is apparently no hardship that this animal cannot endure, when well looked after. I should like to mention the excellent work done by Argentine mules of the 13th Transport Corps and their condition under hard work. To my mind, if such hardy capable animals can be procured for transport purposes, the sooner we seek them in Argentine districts the better. Our mules passed through snow, ice, and rain, and though crossing mountains close on 17000 feet, very few were lost from "heart failure".

"All the mules on the advance were unshod, and as long as their feet were kept trimmed all went well; there were few cases of lameness".

Mules in the recent frontier expeditions have also not been shod.

It will be noted that the small Argentine mule is very favourably mentioned in the above report. It is a very far cry from South America to the high plateaux of Tibet, and the merit of the animal is therefore all the better. The Chinese mule though not so handsome as the Argentine, is a very strong, stout, hardy mule, with a reputation that is hard to beat. A considerable number were captured and purchased by the China Expeditionary Force in 1900-01 and did so well, particularly in draught in the "Pekin Carts", that China has been greatly drawn on by the Indian Government for small mules ever since. The country has also some very fine larger mules 15 hands and over, which are used for riding, and by the wealthy Chinese for their Pekin Carts. The Indian Country-bred under good feeding and care has also done his part well in many theatres of war.

The little Abyssinian mule, a game fellow, went through the Somaliland Expedition of 1904 with flying colours in pack work.

The South African Mule as a draught animal finds great favour in his own country, and a shipment of 250 to India for Mountain Artillery in 1893 was most satisfactory.

#### *Equipment Mules.*

The equipment mules of Battalions, Pioneers, and those of Sappers and Miners are of the same strains previously mentioned. They are slightly bigger and better than Transport, and their record is all that could be desired.

Long may we have mules to help us to fight our battles.

#### **DONKEYS.**

I have a sneaking regard for Donkeys in warfare. The French Armies used a considerable number of them for packing up ammunition to their troops in the Line during the late war. They

were driven across country in  mobs of about twenty and were able to pick their way round the shell holes.

If properly looked after, they are remarkably free from disease, and give Veterinary Service very little concern. The apportioned load according to Transport Tables is  $1\frac{1}{2}$  maunds (120 lbs) It is rather an inconvenient amount as so many of the items for Transport are arranged or packed by maund weights. A better pack weight would be two maunds, i. e. one maund each side, and only donkeys that are equal to that weight should be employed.

In the Tirah Expedition of 1897-98 there were 8297 Government Donkeys and 5557 Hired Donkeys employed. The weight carried was 2 maunds. They maintained their condition remarkably well, and the hired animals were even better than those of Government.

In the Chitral Expedition of 1895 many were employed, and they were well able to negotiate a two maund load on the level, but somewhat failed in scrambling over rocks under that load. It is all a matter of a suitable saddle and proper adjustment of loads, which for small animals should not be of a bulky nature. Moreover, work in short stages, especially in hilly countries, gives the best results.

During my frequent visits to the Frontiers recently, I have noticed lots of very good donkeys that I am sure are equal to a two maund load if properly fed and driven along quietly. One man to twenty donkeys would be economical transport, and it goes without saying that they would require constant inspection to ensure that their backs were free from injury, and that a suitable ration should be assured to them. For road making and mending, carrying stones and earth, they fill a most useful role.

The Tibetan donkey used during the Mission was reported on as a wonderful animal for his size, and two maunds was an easy task.

On the other hand the Somali donkey, which is a sturdy animal with a good back, was apparently only equal to one maund in most cases when employed during the operations in that country in 1903.

A large number were employed during the Nile Expedition of 1884-85. They were mostly hired, and had no disease.

The record of donkeys in the Kohat Kurram Force of 1879-80 was bad for the reason that so many of the animals were very young, or old and unfit: there was no sort of proper selection.

Very large numbers of donkeys are used for transport purposes in Persia. In South West Persia alone there are probably 200,000. The Persian donkey is small, but strong and enduring, and he is equal to a load of 130 to 200 lbs. The practice of Local Transport Companies is to shoe them with a broad webbed shoe for work over the rocky road from Bandar Abbas into the interior.

Afghanistan also is well endowed with an exceptionally hardy donkey, somewhat of the same nature as our frontier animals.

### **PONIES.**

The Knight of old bestrode his palfrey for his greater comfort when on march route; the present day officer is permitted to include his polp pony as a charger for practically the same reason. Officers of Services and Departments not required to do fast work are supplied with small horses and ponies as their chargers, and the riding animals of units of Transport and Mountain Artillery in India are ponies ranging from 13. 3 to 14. 2. They are universally satisfactory in War for the reasons that they require a lesser ration than horses. They are as a rule easier and more comfortable to ride, especially for the inexperienced, and if the equilibrium of the rider suffers by default, mother earth is somewhat nearer. Individual ponies as riders have been made great use of during the late War with marked success. They were used considerably for Mounted Infantry purposes during the War in South Africa, and certain classes of them without question performed very satisfactory work. The Cape Colony and Free State pony for instance, native to the country, was quite able to keep on his legs and cover long distances. Plumer's Rhodesia Regiment in March 1900 accomplished a distance of 70 miles in 26 hours and not a single man or animal dropped out. On 22nd January 1879,

a strong body of mounted volunteers under Lieut-Colonel Redvers H. Buller of the Bechuanaland Field Force, between 1 A. M. and 11 P. M., that is in 22 hours, covered a distance of 70 miles over rough hilly country, the average height of the animals being 14. 2 to 14. 3. The small Basuto pony in those regions is renowned for his stamina. A number of Khirgiz ponies from Asiatic Russia found their way to the South African War, and the history of the journey of these hardy, short-legged, straight backed, broad-quartered, small animals (seldom over 14 hands) is most interesting. Six or eight days were occupied in journeying by road from their place of origin to Orenburg where they were entrained to a Station on the River Volga (either Samara or Saratov), then placed in open boats and floated down the Volga for four to seven days to Tzaritzan, thence by rail to Fiume, and of all the Russian cobs they presented themselves for purchase in the best condition. They had come 3000 miles and travelled for one month to join His Majesty's Forces, and for subsequent shipment from the Port of Fiume to South Africa.

#### INDIAN TRANSPORT PONIES.

In addition to the riding ponies above mentioned the Indian Army maintains a number of Pack and Draught ponies, organized as in the case of mules into Corps. The height of these animals is from 13.0 to 13.3.

India is essentially a country of ponies and small animals, and though there are a considerable number of indifferent specimens, resources must be made use of to the best advantage.

For pack purposes the Indian pony is not an unmixed blessing, and his history in war is far from satisfactory. He has not the stamina of the mule, is more subject to debility, and is much more prone to sore-back. He is better placed in draught, and when suitably selected and properly looked after he proves satisfactory in this sphere. A few extracts from the Veterinary Repots of Expeditionary Forces will make this clear.

*Kohat Kurram 1879-80.*

The animals were not on the whole satisfactory. Every description of pony was sent to the Force, from the diminutive

grass cutter's "tattu", flat sided, narrow chested, rubbing his hocks together, to the big ragged sharp-spined, high-withered ekka pony. They had not the same digestive powers as mules, required more attention in the preparation of their grain and selection of fodder, and their different shaped backs demanded greater care in the fitting of pack saddles. Compact, round-barrelled animals kept their condition and did well, a number of small ones from the Bombay Presidency performing excellent service.

*Chitral Relief Force 1895.*

Ponies did not do well excepting those of Jeypore State Transport. They were used as draught from Nowshera to Durgai, and were sent as pack over the Malakand. They failed as pack over the rough and difficult roads.

*Tirah Expeditionary Force 1897-98.*

There were 10707 Government ponies employed, and report states that they were not as satisfactory or efficient as they might have been, two reasons being that they were physically unfitted for Army pack animals, and they also fell away after purchase.

Hired ponies did better, the reason being that owners looked after them well. Of the Jeypore and Gwalior Transport Trains, report again states that "no ponies could have done better or worked harder than did the ponies of these two trains". They were properly organized, their equipment was perfect, and they worked both as pack and draught.

The Kashmir ponies, with their own "Sunka" equipment, also did good work, and 400 of them were eventually purchased by Government. They were accustomed to hill work, and it is therefore unfair to compare them with "plains" ponies.

*Tibet Mission 1904.*

Four Ekka trains were organized, the ponies being drawn from various parts of India. They were a very mixed lot and suffered severely from excessive cold, many dying, and it was only by building high turf walls that mortality was reduced.

The Tibet and Kashmir Pony Corps were put to great trials in long marches with minimum quantities of food (3lbs ration of

grain) and extremely severe weather, and a large number died (592 died and 211 destroyed) in the two Corps. It was reported that no careful selection could have been made in these Corps.

The Tibet pony proper, as obtained in Central Tibet was most useful, and the First Mounted Infantry commanded by Captain Ottley was almost entirely composed of these animals. Between 12. 2 and 13. 3 hands, big of bone for their size, not by any means handsome and with an enormous coat of hair, they carried their 14 stones day after day over all sorts of ground in splendid style.

***Somaliland Field Force 1903-04.***

Somali pony	...	...	An extraordinarily sound little animal capable of travelling great distances on little food and no water.
Arab	...	...	Adapts itself quickly to the requirements of the country.
South African	}	...	...
English		...	...
Argentine		...	...
Russian		...	...
Indian	}	...	...
Chinese		...	...
Abyssinian		...	...

***China Expeditionary Force 1900—01.***

The Mongolian pony is a hard, sturdy, short-legged animal from 12.0 to 13.3. A fair number was bought or captured by the Force. They were found to be much more suitable for draught than pack, their conformation ill-adapting itself to our pack equipment, sore-backs resulting. They were also found difficult to keep in condition, and were reported on as badly mouthed, sulky, ill-tempered, and difficult to manage excepting by Chinese who are used to them. The mares are much used for the breeding of mules which, as I have previously remarked, are a much better and more suitable product for military purposes.



*Recent Frontier Expeditions, N. W. F. F. Waziristan, etc.*

The records of recent expeditions shew a marked improvement, not only in the quality of the Indian country ponies entertained, but in their work generally. They have not, all the same, shewn the same degree of efficiency as mules. The draught pony corps of N. W. Frontier Force up the Khyber fell off in condition during the extreme heat of June and July 1919 and their feet were somewhat neglected in shoeing. Mules have a distinct advantage in their ability to perform work unshod, excepting perhaps in wet weather when maceration of the horn is more likely. Many country-bred ponies could also go without shoes, at least hind shoes. One unit in Waziristan did so quite successfully. The draught ponies of the Force in Waziristan, during a less exhausting season, performed very satisfactory work, and were in very good order. The most cases of sore-backs were in Pack Pony Corps, this class of ailment being much less in mules. There is no doubt that it is much more difficult to maintain the utility of Pony Corps than Mule Corps, and serviceability of the former therefore resolves itself into more careful animal management, including those most necessary items adequacy of ration and a proper water discipline, which are so apt to be at fault in War. When these are in force, and suitable ponies selected for the purposes required, there is no reason to suppose that pony transport will be otherwise than efficient. Indian country-bred ponies are more suitable for draught, but the necessity for pack on the frontier regions must always be borne in mind, and animals suitable for the dual purpose selected.

### **BULLOCKS.**

Bullocks are unsatisfactory war animals. They are of no use for the Transport of Fighting Formations, and their only place is for Transport service on Lines of Communications. In India their great drawback, and it is a very serious one, is their proneness to the dire Contagious Diseases which are extant in that country. It has been the experience of all campaigns in India that within a very short time after mobilization, either

Rinderpest or Foot and Mouth Disease or both together, present themselves, crippling all useful service, and creating untold inconvenience. There is no escape from these two diseases. They are like the poor, always with us. I have fully remarked on them in my previous paper "Wastage of Animals in War" and further reference is unnecessary. One feels sorry for the old "Bile" of India, but where reliability is concerned, he must be ruled out. The Transport bullock of the present day, both Siege Train and A. T., is not of the same excellent standard that existed when I first made his acquaintance 30 years ago. In ten years I see a vast difference, and it is only to be expected when the production of stock in India, and particularly good stock, is pushed into the back-ground by the more profitable and increasingly valuable crops of cereals and cotton.

Were it not for his serious Contagious Diseases and the difficulty of controlling their spread under circumstances of movement, I should advance him in the scale of military utility, for a pair of good bullocks is surprisingly equal to the haulage of heavy loads, considerably more than the allotted army load of 10 to 12 maunds (800 to 960 lbs), provided the pace is slow, the stages are short, diet is sufficient (it usually is for Bullocks) and rest permits of the act of rumination. He is certainly a willing slave, and he is not very much impressed with fine ideas about harsh treatment. His resistance to disease is considerably influenced by breed and locality. For instance, Southern India animals, *e. g.* the Mysore, are more readily attacked by Rinderpest, and contract the disease in more virulent form than Northern Bullocks of the United Provinces and Punjab, where the majority of our Army Bullocks are drawn from.

In days gone by, Heavy Artillery batteries employed Bullocks of the Siege Train Class, for the Wagons, and from an animal management point they were perfect.

Putting aside the matter of Contagious ailments which constitute the most serious obstacle to the successful employment of Bullocks in War, and probably letting one down at the very moment when there should be no hitch in proceedings, I

have gone carefully into all the records and Veterinary reports of the various Expeditions on the Frontier, and I find there is after all something to be said in their favour. I take little notice of the Kohat Kurram Force of 1879-80, as the bullocks which were considerable on that occasion, would appear to have included a large proportion of physically unfit animals of a type unsuitable for pack work, and moreover one cannot blame animals for suffering terribly from sore-backs when no proper equipment was at first in use. It is inviting disaster to sling loads by ropes over a pad and folded jhool without a "Soonka."

The Inspecting Veterinary Officer of the Chitral Relief Force, in spite of 1290 having died from Rinderpest out of 6363 Hired Pack Bullocks, and 3675 cases of Foot and Mouth Disease, could still say, "Notwithstanding all, by dint of unceasing inspections, withdrawals, and isolations, the Bullock Pack Transport kept on moving, and did some of the best work on the campaign."

With 4413 Government and 9314 Hired Bullocks, and with one outbreak of Rinderpest and two outbreaks of Foot and Mouth Disease, the Inspecting Veterinary Officer of the Tirah Expeditionary Force reported that "There were no faults to be found with the Bullocks; on the whole they were a good lot." They were only used for wheeled transport, no pack.

Again on the Tibet Mission after the stamping out of Rinderpest and Foot and Mouth Disease, "The Bullock Cart Train, the First and Second Bullock Pack Corps did excellent work between Silliguri, Guntak, and Lingtam for the greater part of the expedition, but long days and heavy roads told in the long run and many were returned to India, while others, unsuitable for con- tonments, were sold."

During the recent Frontier Expeditions, Bullock Corps were severely hit by these two diseases, and by occasional Heat Exhaustion, chiefly at the outset, but subsequent proceedings were satisfactory, and the animals maintained a good condition. It is anticipated that Rinderpest will be excluded from military bullocks in future by a process of inoculation rendering them durably or permanently immune before they go on Service, but we

shall have to rely on the old methods of isolation against the Foot and Mouth Disease, as even previous attacks only convey a short lived immunity.

Bullock Transport was greatly in vogue in the South African War, spans of 12 and 16 bullocks in heavy wagons being the mode of employment. It was quite satisfactory for slow moving troops, but again a Contagious Disease was there encountered viz. Pleuro-pneumonia Contagiosa, against which inoculation was practised with success.

In closing this Chapter, I should like to remark on the great boon which has been conferred on the Indian Army in War on the Frontiers by the establishment of Dairies, the majority of the animals being buffaloes. There is great merit in the procedure, and it is just as easy to get these animals up to within reasonable distance of the front as it is to march meat on hoof. Our troops in France also occasionally maintained cows, and Motor Horse Ambulances belonging to Veterinary Service offered no objection to the transport of an occasional cow from place to place, in fact there was no reason why the practice should not have been made more general at all events for the benefit of Casualty Clearing Stations.

### **YAKS.**

The Tibet Mission of 1904 had three Yak Corps of approximately one thousand Yaks each, and only 70 survived, Anthrax, Rinderpest, Pleuro-pneumonia, Foot and Mouth Disease, Debility consequent on work in too low an altitude, and bolting into the jungle, disposing of the remainder. A pure yak ( $\frac{1}{3}$ rd of them only were pure bred, the rest being Zooms or half-breds) cannot live in low regions, Tibetans seldom asking them to go below 8000 feet. They were down to 2300 feet at times, and under such circumstances a pure yak will pant and lie down every few yards, and rapid emaciation ensues.

Yaks are useless as transport animals. They can only travel from six to eight miles per day, require two days a week rest, and an enormous amount of grazing. Two maunds

is all that a yak can carry, and if pushed beyond his pace he lies down and sulks. His habits are distinctly lazy, but when compelled to go is sure of foot, and can negotiate the roughest cliffs possible.

### **CAMELS.**

Cyrus the Great of Persia (559 B. C.) had great ideas of Tactics. At the battle of Thymbra, fearing the superiority of the Cavalry of Croesus, which had a reputation for the skilful use of the long lance and for the adroitness with which they managed their horses, he mounted his Cavalrymen on his baggage camels, and placed them in the first line. The horses of the Lydian Cavalry were so alarmed at the appearance and smell of the camels that they recoiled in confusion, and although the Lydians dismounted, and engaged the infantry of Croesus, they were defeated.

The above is certainly a novel utilisation of the camel, and it is distinctly worthy of special record in the merits of that animal.

The uses to which camels are put in the Army relate chiefly to riding and pack transport. On certain occasions they have been applied to Artillery draught, and in certain districts, as in Karachi and Western India, it is no uncommon sight to see them yoked to low-wheeled carts performing carrying duty. Napoleon employed them for Mounted Infantry purposes in Egypt and Palestine, Napier also in India, and we ourselves in Egypt with marked success in properly organized Corps for Mounted Infantry purposes. In Persia in early times, they were used for Light Artillery (Zemboureks), a small gun being mounted on a wooden saddle.

Riding camels are quite distinct animals, differing from baggage camels as race horses do from other breeds of horses. There are certain breeds that are specially suitable for riding purposes, viz. the Bikanir and Rajputana, famous all over India for their swiftness, the Hajeen of Arabia (Oman), and the Bishareen of the Soudan. The paces of riding camels are the amble and trot, the former

being 4 to 4½ miles an hour, the latter 7 to 8 miles an hour. The gallop is seldom required, and is very unpleasant. Instances are quoted of long distances covered, such as 100 miles in 24 hours. Fortune mentions an Arabian camel having accomplished 225 miles in 28 hours, and General Chesney crossed from Basra to Damascus, a distance of 958½ miles, in 19 days, a daily rate of 50 miles. Nevertheless the capability of a body of riding camels, each with a man and his kit, weighing in all 400 lbs, must not be considered to exceed 25 miles a day with a halt once a week.

The real importance of camels from a military standpoint is however as baggage or pack transport animals, and it is in this respect that my remarks will specially apply. Questions of structural peculiarities, constitution, idiosyncrasy, management, disease etc. are common to all breeds and classes.

There is no more useful animal in existence than the baggage camel, and for military purposes under certain circumstances he is absolutely indispensable. His merits are that he can, as an individual, carry heavier loads than other transport animals, perform work under circumstances or situations unsuitable for other forms of transport, and his cost on purchase and for maintenance on their face values is reasonable. His temperament is peculiar at times, due in a great measure to the fact that he is a male living in a community of males and permitting his passions to dominate him, particularly during the "musth" season. Were he made neuter, he would be just as useful for military service, as has been proved, and even dachis would be able to enjoy his society without any display of unseemly behaviour. The more one is acquainted with him, the more his merits appeal to one, and I knew no animal that repays the kindness and considerate care bestowed on him by his attendants and supervisors, than he does. It is just this attention which makes all the difference to him as a serviceable animal. Were I a young man at the beginning of my career in the Army, there is nothing I would like better than to have the command of one or more Camel Corps, to prove by rational treat-

ment, utility of camels to the highest degree, and to remove them from that Slough of Despond into which the history of wars clearly shews they have been plunged. It is, I think, in many cases idle to talk about demerits of this animal. Personally I will not altogether acknowledge them, as inefficiency is not in the main inherent in the animal itself, but is in point of fact the outcome of ignorance of animal function, injudicious management, and circumstances inseparable from the conduct of war.

Reading history of animals in war one stands appalled at the dead wastage of camels, and if my remarks are strong, they are only made in the hope that the slate may be washed clean, and that our future figures entered thereon may shew better reading. In my previous paper entitled "Wastage of animals in War", I shewed the enormous losses in camels that had been experienced in various Campaigns, and it is perhaps unnecessary to refer to them again. At the same time it is important to show that the virtues possessed by camels have been played with, and that a misunderstanding of their nature and capacity for work as animal machines lies to a very great extent at the root of their short-comings.

It is very commonly supposed that a camel is possessed of phenomenal endurance, to fit in with which he is specially endowed with a series of water cisterns in his stomach, and a hump as a food store. In other words, he carries his rations in (not on) his person, is an expense store in himself, and proof against privation. The idea has been dwelt on by many writers to a fanciful extent. He is presumed to have the courage of a stoic, yet without intelligence, and he drops down dead.

Was there ever any greater fallacy. The capacity of the so called cisterns is a quart on the right side of the stomach, and about a gallon on the left side. The contents are a mixture of food, water, and mucus. The hump consists largely of adipose tissue, and though its size and firmness are indications of health, and it will waste with privation, it is no more of a

larger than the fat on ones own body. Apart from disease to which I will presently refer, the stoic dies from exhaustion induced by privation of food and water, and it is the intelligence of the human being who is constituted his mentor that is at fault, not the camel's. Until this is realized, grave loss of camels will result. No human, animal, or mechanical engine can perform work without fuel and water. It is a very elementary proposition, and it is responsible for a large amount of the demerits ascribed to camel kind, notably disease, death without apparent cause, heat apoplexy or exhaustion, inability to stand climatic changes etc.

The Afghan war of 1878-80 cost us close on 60,000 camels (including desertions), and the causes of such heavy wastage were commonly ascribed to the following :—

“(i) Scarcity and indifference of food.

“(ii) The great strain thrown on the animals at the commencement of the Campaign.

“(iii) The employment of a large number of camels only accustomed to the plains of India.

“(iv) The severe weather of the winter and early spring.

“(v) The necessity of employing the animals during a season of the year when at ordinary times they suffer perennially and are uniformly given rest.

“(vi) The uselessness and ignorance of the men sent as attendants on Government camels”.

I wish specially to draw attention in the above to the factors of Food and Man, and more particularly to Food which was not only scarce but indifferent in quality. In the old Kabul papers I find the following scale laid down :—

Camels on command	...	3 seers Barley.	} 10 seers Bhoosa or equivalent in cost of any other fodder. No Bhoosa. at graze.
„ in cautionsments	...	1½ „ „	
„ on fatigue duty	...	2 „ „	
„ at graze	...	1 „ „	

The amount of Barley (a very inferior grain to the gram of India for working ruminants) cannot be considered excessive. I find no reference in any report to Bhoosa, but considerable



stress is laid on the inability to obtain grazing, and what grazing existed was not of a kind the animals were accustomed to. Grazing has always been the basis of camel feeding in every camel country, and the estimated time per day to obtain a sufficiency of aliment is six hours. What possible grazing is procurable at all seasons of the year amongst the rocks and mountains of the North West Frontiers, and what time can be devoted to grazing even if the Military situation permits of it, is difficult to imagine. It is quite an impracticable idea on Service. The wretched animal has to fall back on his grain ration administered by men tired out with marching, and he is lucky if he gets a portion of his scheduled amount. It is a picture that is applicable to any theatre of War.

The Report above mentioned goes on to say:—

“It is a well known fact that no amount of grain will serve to sustain camels that do not get their necessary amount of grazing. For Military reasons it was deemed desirable that the troops should push to the Front in November 1879, without halting. The marches were long and the roads indifferent. The baggage animals often came in at 5 A. M. having marched from 8 o'clock the previous morning and again were on the move by 10 A. M., so that the animals had neither time for grazing or resting”.

It is an old story carrying profound lessons. Experience is often dearly bought, and the lesson should therefore be the more appreciated.

Thank goodness we have broken away from many old ideas of darkness and empiricism in regard to the management of this indispensable animal of transport under war conditions. There still, however, remains a lot to be done to put him on a better plane of health, efficiency, and merit generally. Officers and men know him now more perfectly, and the personal factor of man makes for his greater usefulness. Stall-feeding, in practically the same manner as in other military animals, has done wonders in the reduction of the disease Surra as well as adding to his increased power for work. We have progressed

very considerably in recent times as the records of sickness and inefficiency, and more especially the condition and appearance of our service camels, distinctly and surprisingly show. Unfortunately with work up the river beds in Waziristan during the past hot weather there has been an increase of Surra over the last year from the prevalence of biting flies. Deaths from heat exhaustion, cases of night blindness, and a considerable number of sorefeet from traversing river beds, too, have sent up inefficiency. Camels feet were never intended for water, and in normal times it is the wise custom to refrain from work in the middle of the day, indeed owners of camels do not as a rule work them from the middle of May to 1st October. If operations are to continue in these regions in future years, it would seem that the camel would have to be equipped with goloshes on his feet, goggles on his eyes, and a Dolly Varden hat on the top of his head. Being of supercilious demeanour at any time, he would look a real gem so attired, and he would prove a fortune for the "Movies".

The carrying power of a camel depends on the breed, the climate in which he is employed, and the distance to be traversed. The usual load of an Indian camel is 5 maunds or 400 lbs. e.g. five bales of Bhoosa, or two on each side and one on the top. An equal number on each side and none on the top, say three bales of bhoosa on each side or a total of 480 lbs. is a much better balanced load, and the removal of any article from the top has saved many hump galls. Moreover, ability to carry extra weight on occasion is a direct return for the good food and attention which have been bestowed on the animal. In Algeria, Morocco, Tunis and Tripoli the load is from 300 to 400 lbs., in Egypt 350 to 550 lbs., in Syria, Asia Minor, Persia and Tartary 550 to 600 lbs. Civilian camels engaged on local duty at present in the Waziristan Force at Dera Ismail Khan are carrying from 700 to 1200 lbs., twelve bales of Bhoosa (960 lbs.) being a common load.

With regard to the merits of different breeds of Camels, during the Afghan War of 1878-80, the plains camels were prefer-

able for service on the hotter or Indian side, but were reported on as useless for the higher or colder regions. Of the plains camels those of Bikanir were superior to the Punjab, and the latter better than the Sind. Of the Punjab camels the best were obtained from Rawalpindi.

The Salt-Range camels with Corps at present in Waziristan are in excellent order. A consignment of beautiful Persian camels obtained last year nearly all died during the heat of summer in Waziristan.

In the Nile Expedition of 1884-85, the Delta camel of Egypt, a large heavy powerful animal used for carrying loads on the cultivated lands of the Delta, was at first thought unsuitable for the Desert, but events proved him to be most satisfactory, and he withstood the desert marching nearly, if not equally as well as other breeds. A Battery of Artillery with Delta camels marched the whole way from Cairo to Matammeh across the Bayuda Desert.

Crossed Delta and Desert camels are useful animals. The Bishareen is a desert bred animal, small, and essentially a riding camel.

The Kabbabish camel of the Bayuda Desert is larger and stronger than the Bishareen. He was principally hired when our own transport broke down during the Nile Expedition. As he subsists on grazing entirely, time (which can ill be afforded) is necessary to admit of a grazing system to be carried out.

A big soft camel with an exceptionally large hump is found in the Dongola District. He is almost impossible to fit with a Government saddle.

The Arabian camel sent from Aden to the Nile Expedition was well adapted for riding and baggage purposes, and proved equally as good, if not better than any employed.

The remarks of the Veterinary Inspector, Lines of Communication of the Somaliland Field Force in 1904 are well worth quoting, as the country is essentially one for the employment of Camel Transport. He says:—

“A more cosmopolitan array of camels, both riding and

"burden, has probably never been seen in any campaign".

"Riding camels were Bikanirs, Arabs, and a few Egyptian".

"Burden camels were Indian, Baluchi, Arab, Somali and Abyssinian. All did good work if they were good specimens of their kind to start with, but the Bikanirs carried more and outlasted the other riding camels with great ease so long as they got water and food fairly regularly".

"Of the burden camels the Indian and Somali bore the heat and burden of the day and outmarched and outlived the Arabs and Abyssinians. Where it is possible to water and feed them the Indian camels will outlast the Somali also, but when the pinch comes and they have to go on little food and no water for days and days, the Somali camel will pull through and save the situation, though it never will be any use afterwards.

"Some camels did extraordinary marches without water, Somalis as much as 18 days, and Indians nine days, but they never recovered. A camel if once allowed to get below par recovers very very slowly".

"A great deal of nonsense was talked about the best way to prepare animals for trekking in Somaliland, some people insisting that it was fatal to give ponies and Somali camels any grain as it only created an artificial appetite and thirst which could not be satisfied on the march, and therefore the animals would die, though the previously only grass-fed ones would do the work and live. This is quite a mistake. The ordinary rules for getting animals fit hold good in Somaliland, with the exception that it is undoubtedly sound owing to the exigencies of the country to teach animals to drink much and seldom rather than little and often".

"That Somali camels do very well on a regular ration of grain, dry grass, and water, was proved by the camels in the Carts. Each camel got 6 lbs. of grain and 15 lbs. of grass daily, and water every third day. They did steady work and kept, and some even improved, in condition".

I have specially quoted the above remarks as they not only shew merit of animals, but an intelligent handling of them.

I close this chapter with a strong wish that the few remarks I could crowd into a short article will induce officers and men to take a special interest in our Army Camels, their selection, their suitability for Army Service, their care, reduction of inefficiency by enlightened management, and last but not least the scientific elucidation of the peculiar diseases to which Camel kind is heir, and which are imperfectly understood. And may good luck always attend him in Peace and War.

### **ELEPHANTS**

From very early times Elephants have taken part in War. They were not only used to stampede Cavalry and to trample down Infantry, but they were fighting machines protected by armour, with steel blades fastened to their tusks, and saddled with towers or howdahs containing several men and from which missiles of various kinds could be thrown. On occasion the elephants of rival forces would have a duel *a la mort*, the rest of the forces halting to contemplate the contest.

Perhaps the first appearance of elephants in historical battle was at the Battle of Arbela in 331 B. C., when Darius Codomannus marshalled fifteen elephants in his fighting line against Alexander the Great. No mention is made of the part they played on that occasion, but from that time onward their importance was considerable.

In 326 B. C. when Alexander the Great reached the River Jhelum (Hydaspes) he was opposed by King Porus. In the battle which ensued in the immediate neighbourhood of Chillianwala, King Porus, trusting to the terror inspired by his elephants, disposed them to the number of 200 in the front line, a hundred paces apart, his Infantry being behind, and his Cavalry and chariots being on the flanks. Seeing the elephants, Alexander decided not to make a frontal attack, but relying on his superiority in Cavalry he made his main attack against the left flank of Porus, one Brigade working to the rear. The result of this was that the Indian Cavalry were driven to shelter behind the elephants. The Macedonian phalanx then advanced, and as elephants crashed through it the situation was for a while serious.

The Indian troops were, however, gradually hemmed in, the elephants, as the battle progressed, became unmanageable from their wounds, and attacked friend and foe indiscriminately. At last they refused to charge any longer. The Indian Troops were defeated with heavy losses, and King Porus, who fought most bravely from a huge elephant until the very end, sought refuge in flight to be captured shortly after. I have alluded to this battle specially, as it is perhaps the most glorious encounter in which elephants participated. They were certainly not relished by Alexander's troops for in the complaints of the latter of war weariness and that they had gone far enough, they stated that towards the East there were still more powerful monarchs than Porus whose war elephants and armies were stronger and more numerous than his.

At the battle of Ipsus in Asia Minor in 301 B. C., Seleucus, a great soldier and one of Alexander's Generals, was said to have used his elephants (480 in number) with great effect against Demetrius. He obtained the elephants and large sums of money from Chandragupta of Indian fame in exchange for territory and the matrimonial alliance of his daughter.

The elephants of Antiochus Soter, a successor of Seleucus, in 280 B. C., caused a mad stampede amongst the Cavalry of the Gauls (said to have numbered 40,000) who had overrun Northern Asia Minor and settled in Phrygia. Antiochus celebrated the victory by a trophy bearing the figure of an elephant. In all probability they were Chandragupta's elephants. I mention this as of interest to India, elephants being long-lived animals. They are remounts at 40 and 50 years and perform useful work up to 80 and 100 years.

Later on at the Battle of Raphia in Palestine in 217 B. C., there was an encounter between Indian elephants of Antiochus the Great and African Elephants of Ptolemy of Egypt in which the Indian Elephants prevailed, although the battle was lost to Antiochus.

The Macedonians at the siege of Megalopolis attacked with elephants but the defenders strewed the ground with long spikes

concealed under loose earth, and the huge animals maddened with pain, broke back, killing their own troops.

In the First Punic War the Carthaginian Army used elephants before Palermo. The Romans struck terror into them by means of flaming arrows and fireworks. They were put to flight, trampled down their own infantry, and the Romans taking the offensive gained a victory.

The Carthaginians were fond of elephants for War purposes. The great Hannibal took 200 to Spain, and afterwards 37 of them crossed the Alps with him into Italy (219 BC). They were ferried across the River Rhone on rafts specially constructed. What with exposure, and attack from the Roman Legions in the battle of Trebbia, only one remained. He obtained 40 remounts and only seven remained to take part in his final overthrow on Italian soil. At the Battle of Zama in Africa four years after, his elephants (80) were defeated by the Romans. Romans, as a rule, disliked encounter with elephants, but on this occasion a fine example of personal combat was set by the Roman Commander Scipio which ended in the destruction of nearly all the elephants.

The Parthians being essentially an Army of light Cavalry had no use for elephants, while under the Sasanian Dynasty of Persia the Corps of Elephants was the most important of the main Arms of Service.

In 1399 when Timur invaded India, he engaged the Army of Mahmud Nassir-ud-din at Ferozabad near Delhi. The Army of the latter included elephants armed to the teeth. Timur gained a victory by driving a herd of buffaloes with burning faggots attached to their horns amongst the elephants, causing them to stampede with a resulting discomfiture and defeat of the Indian Troops.

At the Siege of Arcot in 1752, Chanda Sahib had war elephants with iron plates on their heads, which were trained to butt against the gates and break them down. When fired on they turned tail and created disaster amongst their own troops.

The above will shew that they have little merit as fighting machines, and that they even constitute a danger to the side to which they belong.

The last appearance of elephants in battle was in the Afghan War of 1878-80, and they finally disappeared as Field Transport after the Chin-Lushai Operations in 1890. In Afghanistan they were employed in Heavy Batteries, each gun being drawn by two elephants, the total number on the establishment of a Heavy Battery being six. They performed great service at the Battle of Peiwar Kotal (2nd December 1878) packing four Horse Artillery guns up the steep ascent of the Kotal during the night, leading to the surprise of the enemy. Their immense strength, their silent movements, and aptitude for climbing over rough ground were of especial value for this purpose.

The drawback, however, to elephants in Heavy Artillery is that they are very gun shy, and it was, for this reason, and the difficulty of providing them with their enormous rations, that they lost their place as War animals. A big animal of this kind is also a fine mark for the enemy, and when one is knocked out or rendered ineffective, it is relatively a serious loss of animal power to its unit.

Elephants in heavy batteries continued for some fifteen years after the Afghan War, and I recall those of a battery, and their stable (still in existence) at Jhansi, of which I had charge nearly thirty years ago. I remember too the old joke against the Veterinary Officer, that when his elephant patient required an enema, application had to be made for the local fire-engine.

As transport in the Chin-Lushai Expedition, the 70 animals employed proved most valuable and performed very excellent work.

The only association the Army of India now has with the elephant is the scale of diet still permitted to be retained in Army Transport Tables. *Sic Transit Gloria Mundi.*

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## **WAR MEDALS OF THE INDIAN ARMY.**

The credit for inaugurating the practice of a general grant of Medals to men of the Army in commemoration of their services in various campaigns belongs to the Honourable East India Company.

With one exception, in 1650, when the Commonwealth presented one general medal to the officers and men of Cromwell's Army for the Victory of Dunbar, the British Government presented no general medal for any campaigns until Waterloo in 1815; the actions of the Peninsula War remained unrewarded until 1848.

The Armada, and the numerous Naval Victories up to the battle of the Nile in 1798, were commemorated by gold medals presented to high commanders, in some cases by Government and in others by private individuals, but on these occasions there was no general distribution of medals to all ranks.

It is impossible within the limits of this article to give a description, however brief, of even the rarer war medals or a list of the Regiments who earned such medals or, what is most important, from a collectors point of view, the numbers of men of each Regiment who lived actually to receive the medals. The former may be found in Tancred or Irwin on War Medals and Decorations, while the latter information is unfortunately not available anywhere for the Indian Army in a readily accessible form.

When the Hon'ble East India Company in 1784, for the first time adopted the principle of a general distribution of medals as a reward for the 1778—1784 war against Hyder Ali and the French, now generally known as the Carnatic Medal, it was with no idea that these medals should be worn by the sepoy as a decoration; the medal had no loop for suspension and no ribbon, and this custom prevailed with the medals issued to their troops for the next few years. This accounts for the fact that many of the old medals have had a hole punched in them by the recipient to enable him to hang the medal round his neck.

It took some years to evolve the system of a general medal for troops, with an additional recognition for such men as

were actually present at various actions, and it was long before the medal was accepted officially as a military decoration. Even after the issue of the Seringapatam Medal in 1808, when the Hon'ble East India Company made another step forward by issuing a medal to all ranks, British and Indian, portraits of British Officers may be seen wearing the medal round the neck or at the button hole suspended by different colored ribbons.

Before we come to the various campaigns for which medals have been granted, it would be as well to understand what we should look for in a medal and what constitutes its interest and value from a collectors standpoint.

After 1839, and this includes the Indian General Service Medal of 1799-1826 which was not issued until 1851, practically every medal bears round its edge the rank, name, and regiment of the recipient, and the interest and value of the medal depends almost entirely on this inscription; it is obvious that if two Regiments each 1000 strong go into some action or through some campaign in which one regiment loses half its numbers and the other remains untouched, the value of the medal or clasp of the former regiment is far greater than that of the latter owing to the smaller numbers issued. Similarly the medal of some regiment which distinguished itself is of more value than that of another which on that occasion played a less conspicuous part.

This however, does not hold good for the Mutiny campaign and thereafter, when a distribution of the medal was made to the next of kin of all men killed, wherever the next of kin was traceable.

The interest of the medal does not end here. With the 20 clasps obtainable by Indian troops on the Indian General Service Medal of 1799-1826, the 23 clasps on the Indian General Service of 1854 to 1893, the 7 clasps on the Indian General Service of 1895-1901, there can be a very large number of combinations of clasps on the medal, some of which are unique for certain regiments or individuals; lastly we have the combinations of the medals which an individual man has obtained.

As regards the inscription round the medal, the fact that

it is missing on the Carnatic 1778-1784 medal, the Mysore 1790-91 Medal and the Seringapatam Medal of 1799 is not material. The first two medals are so rare that their value could hardly be enhanced by the recipients regiment being known, whilst the Seringapatam medal, although much more common, is not of ten met with. The value of all three of these medals is somewhat discounted, at any rate in its gold form, by the fact that they were presented to all kinds of highly placed Europeans and Indian who were not actually present at any engagement.

The types of medals issued by the Hon'ble East India Company and afterwards by the British Government to the Indian Troops, vary in their ways of commemorating campaigns and actions.

1. The plain medal without clasps or suspender such as the Carnatic, Mysore, Egypt 1801 Medal etc.

2. The medal with suspender and with the actions commemorated engraved on the medal itself, such as the Ghuznee 1839 Medal, the 2nd Afghan War 1840, with Cabul, Kandahar and Ghuznee engraved either separately or together and the Scinde War 1843 with Hyderabad, Meanee engraved on the medal.

3. The medal with the action commemorated on clasps attached to the medal, the clasp for the latest action nearest to the medal, such as the Indian General Service Medals of 1799-1826; of 1854 to 1893 of 1895 to 1901, and the Punjab War 1848-49.

4. The medal with the first action engraved on the medal in the exergue and the remaining actions on clasps, such as the Sikh War 1845; the clasp for the latest action farthest from the medal.

5. The solitary example of the West African Medal with the action Mwele 1895-6 on the rim of the medal received by 124th and 126th Bombay Infantry.

6. A few bronze stars such as those granted for Maharajapore and Punnier of the Gwalior War of 1846 and Lord Roberts' March 1880.

As stated before the first medal issued was the Carnatic medal for the First Mysore War 1778-1784, and the next was the Mysore medal for the Second Mysore War in 1791-2.

Both of these were presented only to the Indian troops and neither their British Officers nor the King's Officers and Men received the award. Nothing is on record as to the numbers that were issued, but as practically the whole of the Madras Army of those days and about 5000 men of each of the Bengal and Bombay Armies were engaged, the number must have been considerable. A few gold medals were issued to high Indian Officials, but the general issue was in silver, of two sizes, the larger for Indian Officers and the smaller for the rank and file.

The Carnatic medal was struck by the firm of Young and Shepperd in Calcutta, who contracted to charge Rs. 1-for each medal struck in addition to the value of the gold or silver in the medal, the original cost of the dies, estimated at Rs. 600-to be also paid for. (Tancred)

Practically whole of the Madras Army of those days was engaged, of whom nine still survive as Madras Regiments and seven as reconstituted Punjab Regiments, the latter bearing on their colors the battle honors which were won by the Madras Regiments, prior to their reconstitution in 1903.

Five Bengal Infantry Regiments were also employed in the Carnatic, of these one Regiment was disbanded in 1861, the remaining four having been swept away in the Mutiny of 1857.

The 24th Bengal Infantry especially distinguished itself at Cuddalore on 25th June 1783, one of the prisoners taken being a French Sergeant named Bernadotte afterwards a Marshal of France and King of Sweden.

The 1-7th Bengal Infantry was raised in 1796 from a nucleus formed from the 24th Bengal Infantry; the 1-7th also mutinied at Lucknow in 1857 but a large number of the Regiment remained faithful and (their number being then 13th Bengal Infantry) about 170 of the Regiment took part in the Defence of the Residency, the survivors being incorporated into the Regiment now known as the 16th Rajputs.

This is the only shadowy claim of any Bengal Regiment now existing to any connection with the Carnatic war.

The present 7th Rajputs however claim to be the direct representatives of the old 24th of Cuddalore fame in that the Regiment was raised in 1804 as the 24th, (the original 24th having been disbanded in 1796) and was admitted to the native designation of the Regiment whose number it had taken "Craum-ki-pul-ton"

A force of six Bengal Infantry Regiments, the Kandahar Horse, one Madras and three Bombay Infantry Regiments were employed in Gujerat from 1778 to 1784.

These were also awarded the Carnatic Medal.

The Kandahar Horse were disbanded in 1841 for misconduct in Afghanistan, the six Bengal Infantry Regiments mutinied in 1857, the Madras Infantry Regiment was broken up in 1832 and only two Bombay Infantry Regiments now survive in the 101st and 108th.

The Medal granted for the 2nd Mysore War 1791-2 was also struck in two sizes for issue in the same manner as the Carnatic Medal.

Nothing much is known as regards the Medal and the dies are not now in existence.

Both this and the Carnatic Medals have milled edges and might be mistaken for coins; in collections both are generally shown with a suspender bearing a yellow silk cord.

As in the Carnatic campaign, practically all the Madras Army was employed and are still represented in the Army List by thirteen Madras Regiments and seven reconstituted Punjab Regiments.

The Bengal Army furnished six Battalions; these all disappeared at the Mutiny of 1857.

The Bombay Army was represented by twelve Infantry Regiments but the force only arrived in time to take part in the last action before Seringapatam on 16th February 1792.

Six out of the twelve Bombay Regiments still remain.

In collections the medal is generally shown with a suspender and a yellow silk cord.

The medal for Seringapatam 1799 was issued in 1808 and was given to all ranks, British and Indian. The medal was struck in 1801-02 at the Soho Mint, Birmingham from a die cast by a Mr. Bolton. The medal was made in 4 metals, gold for high officials, the majority of whom were not present at the campaign, silver gilt for field officers, silver to Captains and Subalterns, bronze to British N. C. Os and men and Indian Officers and N. C. Os., and in tin to the sepoy. The medal, which originally had no loop for suspension, was fitted with a loop afterwards and worn with a dark orange ribbon to represent a tiger's skin, Tippu Sultans national emblem.

The number of the medals actually issued was 45000 tin, 5000 bronze, 1030 silver, and 30 gold but these do not include the Bengal troops for whom the Bengal Government copied the die and issued a special medal in gold and silver, only 83 of the former and 2786 of the latter; this medal is country made, of rougher workmanship, differing slightly in detail from the English issue and restrikes are not uncommon.

The die of the English struck medal is still in existence and the majority of the medals from this die went to the Madras troops who formed the majority of the Indian troops employed.

Representatives of the Regiments employed still survive in seven Madras Regiments, the 26th 27th and 28th Light Cavalry and two reconstituted Madras Regiments.

The Bengal Government provided two Battalions and 3000 volunteers selected from every Bengal Regiment then existing.

On their return from this campaign the survivors were formed into four Bengal Infantry Regiments all of whom vanished at the Mutiny in 1857.

The Bombay Government furnished six Battalions of whom five Battalions are still on the rolls.

In addition to the honor of Seringapatam on their Colors, the 103rd, 105th, 107th, bear the word Seedaseer for their gallantry in beating off the attacks of 12000 men of Tipoo Sultans Army for a whole day until reinforced by H. M. 75th and 77th Regiments.

In the course of the next few years the Hon'ble East India Company issued three more medals, but only to their Indian troops. For Egypt 1801, 16 gold and 2199 silver medals were issued in 1811. The die of this medal is still in existence and is cracked; it was evidently cracked at the time the medals were struck, as the flaw can be seen on existing specimens. This medal was fairly evenly distributed amongst the three Presidencies, of whom the only surviving representatives are now the Madras Sappers and Miners and the 102nd and 113th Infantry.

The British troops and their officers and the officers of the Hon'ble East India Company received no reward until 1850 when a bar Egypt 1801, on the Peninsula Medal was awarded to all survivors.

A medal for Java 1811 was similarly given to the Indian Troops only, 133 gold and 6519 silver medals being issued.

This medal went mainly to the Bengal Army; the Madras Pioneers, (now the Sappers and Miners) receiving 300 and a few going to the Madras Artillery. This die also is still in existence.

The Sapper and Miners and the Governor Generals Body-guard are the only surviving representatives of this force.

As before, the British Officers and Troops received in 1848 the Java 1811 clasp on the Peninsula Medal.

A Medal for the action of Rodrigues 1809, Bourbon and the Capture of the Isle of France 1810 was similarly presented only to Indian Troops, 45 Gold and 2156 silver medals being issued. No information is now available as to the dies of the medal or the distribution of the medal, but approximately 150 went to Bombay, 500 to Bengal and the remainder to Madras. The 104th Rifles and 2 reconstituted Madras Regiments still survive.

The majority of the troops employed were king's Troops, about 14 Regiments but no award was made to them or the British Officers of either the King's or the Honourable East India Company's troops.

All the above medals were issued without suspension loops and evidently were never meant to be worn.

We next come to the rarest and most interesting of the Indian medals, the Indian General Service Medal 1799-1826, with 21 clasps of which only 20 were obtainable by the Native Troops, as they were given a special medal by the Honourable East India Company for the Ava campaign and were therefore not eligible for the Ava Clasp, which went exclusively to all British Officers and Troops: ribbon light blue.

This however, was not the next medal to be issued. It was not granted until 1851, by which time the Honourable East India Company had presented medals to the troops for later campaigns. The date 1799-1826 on the medal is a mistake. The medal was struck by the British Government and they evidently intended to strike a Seringapatam clasp to commemorate 1799; but when the medal was ready it was pointed out that the Honourable East India Company had given a medal for that Campaign, both to the British and Indian Troops. Nothing is on record regarding the original die of the medal and the information about certain clasps is very sketchy. Medal rolls were not called for until 1848, and they came in haphazard for the next seven years; hence it can be readily understood, especially in the India of those days, that if there were any survivors of some of the battles, 45 years later, the information of a medal being issued probably never reached them.

It is very doubtful, for instance, whether out of the few hundred Indians who alone won the "Defence of Delhi" clasp in 1804 more than two or three dozen came forward to claim the clasp 44 years later, and no genuine clasp for this battle or for Seetabuldee is known to exist in any of the Collections in England.

Of the clasps issued, Allighur, Battle of Delhi, Laswaree, Defence of Delhi, Battle of Deig, Capture of Deig, Nepaul and Bhurtpore must be sought for in the Bengal Presidency, those of Assye, Asseerghur, Argau, Gawilghur and Maheidpore are all Madras Regiment clasps, as also are Seetabuldee and Nagpore; Kirkee and Poona are Bombay clasps, but were also received by the Madras Pioneers, Corygaum was issued to only one Bombay



Infantry regiment, the Poona Horse, and a few Madras Artillery men. As far as can be ascertained only 92 Corygaum clasps were issued; of the five officers who survived the engagement two alone lived to receive the clasp 34 years after, 70 went to the 2/1st Bombay Infantry in conjunction with the Kirkee Poona clasp, one was received by a British Soldier of H.M. 65th Foot (York and Lancs) and the remainder went to the British and Indian personnel of the Madras Artillery.

Excluding Ava, Bhurtpore and Nepaul, Biddulph, a great authority on the matter, states that only 700 medals were issued to the British Troops and their officers, that is to say only 700 survivors put forward claims to having been present at one or other of the 18 engagements commemorated by this medal. Even taking into consideration that there were five times or more Indian Troops employed as there were British, it is unlikely that the number of applicants for the medal was in the same proportion. Seetabuldee and the Defence of Delhi were the only two engagements with purely Indian Troops employed and as stated above, no genuine clasps of these two battles are known to exist, although Tancred states that two Europeans and two Indians received the Seetabuldee clasp.

During the period whose battles this medal and its clasps commemorate, the Honourable East India Company selected two campaigns and gave a special medal for them to the Indian Soldiers only, one very interesting one for the Nepaul War of 1816 and one for the long Ava campaign of 1824-26.

The Nepaul medal is especially noteworthy as it was given to Indian Officers who had actually been engaged against the Nepalese and to such Non-commissioned Officers and men as had been recommended by their Commanders for gallantry.

It was in fact the first medal in History given for personal gallantry and is one of the rarest of the Indian medals. No records remain as to the date or the numbers of medals issued; it was given only in Silver with the yellow ribbon. The Ava medal on the other hand is one of the commonest of this series, no less than 43133 having been struck in silver and 759 in gold.

For some curious reason which has never been explained, nearly half of the medals allotted for the Madras Troops, who formed four fifths of the force, were never claimed and only 25000 were actually issued. A very fine specimen of this medal was obtained in Vellore by the writer two years ago. The ribbon is practically the same as the Peninsular Ribbon, crimson with blue edges, but  $\frac{1}{4}$ " longer than this latter ribbon.

One gold medal only was presented to Sir Archibald Campbell the Commander of the Force; all other officers, Kings and Honourable East India Company, received in 1851 the clasp Ava on the Indian General Service Medal 1799-1826. The Nepaul clasp was given to Indian Troops other than those who received the special Nepaul medal, but the Ava clasp was not granted to any of the Indian Ranks. The medal was struck by W. Wyon and the gold ones are exceptionally fine, being of 23 $\frac{1}{2}$  carat gold.

The medal was issued without the name of the recipient being engraved on it and was issued in 1828.

In this connection it should be noted that as already stated the Indian General Service medal of 1799-1826 was not issued until 1851 and arrived in India from the London Mint unengraved; but as the order in India about engraving the names of the recipients had come into force in 1844, no specimen has I believe, been found without a name on it.

The Bengal troops were engaged at Alighur, Battle of Delhi, Laswarree, Defence of Delhi Battle of Deig, Capture of Deig, Nepaul, Bhurtpore and one Cavalry Regiment at Seetabuldee and Nagpore.

The only surviving representatives who were present at Alighur, Battle of Delhi, Battle of Deig and Capture of Deig are the 2nd Rajputs, of Laswarree 1st Brahmans and 2nd and 4th Rajputs, of Nepaul 1st Brahmans. 2nd, 4th and 8th Rajputs, 5th Infantry Bengal Sappers and Miners and 2nd Bengal Lancers, of Bhurtpore 1st Lancers, 1st and 3rd Brahmans, 2nd Rajputs, 1st, 2nd and 9th Gurkhas and Bengal Sappers and Miners.

The Madras troops were present at Assaye, Asseerghur, Argaum, Gawilghur Seetabuldee, Nagpore and Maheidpore and most of the Regiments are still on the Army List.

The Bombay troops were at Kirkee, Poona and Corygaum and the Regiments then present are still serving.

The 1-1st Madras Infantry had, in 1806, been degraded from their position as the senior Regiment of the Madras Army for their participation in the Vellore Mutiny of that year and had been reformed as the 1-24th. For their gallant conduct at the battle of Seetabuldee in 1817 the Regiment was restored to its position as the 1-1st (now 61st K. G. O. Pioneers).

There were two curious clasps issued on the medal for this campaign; not only were single clasps issued for the battles of Kirkee, Poona, Seetabuldee and Nagpore but composite clasps for Kirkee, and Poona and for Seetabuldee and Nagpore were issued in lieu of the single clasps to such men as had been present at both actions.

The Kirkee and Poona clasp is fairly common, the Seetabuldee and Nagpore clasp could only have been received by the survivors of one Bengal Cavalry and two Madras Infantry Regiments of which the 61st K. G. O. Pioneers are the sole remaining representatives.

The next medal issued by the Honourable East India Company and granted to all Ranks British and Indian, was for Ghuznee 1839.

The design of this medal was made by a Committee of Officers and the medal was struck in 1842 at the Calcutta Mint, where the die still exists. The gate on the obverse of the medal is the one blown in by Lieutenant Durand when the fort was assaulted. The ribbon is half green, half crimson. Two dies were used for the obverse one having a much wider border than the other.

The major proportion of these medals were engraved before issue. No Madras Troops received this medal and only a few Bombay regiments; the majority of the force consisted of Bengal Troops.

For the Afghan War of 1840-42 no less than seven medals were struck, four of which are of Type number two mentioned at the beginning of this article. A few of the Medals of Type Number 2 have Victoria Regina on the obverse instead of Vic-

toria Vindex and a few of the Cabul medals have the name of the engagement spelt Cabul.

These may be passed over without remark, the rarest being the type with Ghuznee Cabul on it, of which only 1500 were issued, while the Cabul type is the commonest, 12700 having been issued. The interest of these medals lies entirely in the numbers issued to certain units; for instance, of the type Candahar, Ghuznee, Cabul medal 6211 were issued, but the Bengal Sappers only received three and the Madras Sappers one. The three really interesting medals of this campaign are the Jellalabad Medal of which two types were issued, and the Khelat-i-Ghilzie medal, both for the defence of these two places.

The first Jellalabad medal was actually issued and then hastily withdrawn; it is said that H. M. Queen Victoria disapproved of the issue of a medal, to commemorate so gallant a defence, which did not bear her effigy. The medal had been designed and struck in Calcutta.

The Second Jellalabad medal, generally known as the Flying Victory, from the design on the obverse of the angel flying over the beleaguered city, was designed by W. Wyon and struck in London.

By this time, however, the recipients of the First Medal, British and Indian, had scattered and a very large proportion declined to return the original medal and receive the other. It is not possible to say from the records how many were returned. In this particular case the relatives of all the men who died in the siege were given the medal and to them the Flying Victory type was distributed.

In all about 2600 of the two types were issued.

The die of the Indian-Struck medal is in the Calcutta Mint. The first medal was issued unengraved and if a name is found on the medal it was put on by the recipient himself.

Of the Khelat-i-Ghilzie medals 932 were issued, of which only 55 went to British troops. The Indian medals went to the 43rd B. N. I., now the 6th Jats, (247) and the 3rd Shah Shujahs Infantry, now the 12th Pioneers, (569) and the remainder to the Bengal Artillery.

This medal is extremely rare.

All the medals of this campaign are worn with the watered silk ribbon of the rainbow pattern.

A medal was given for the China 1842 campaign and this is the first medal to be actually issued bearing the Queen's Head, as the Second Jellalabad Medal was not issued until 1845 and the Indian General Service of 1799-1826 did not appear until 1851.

This medal was issued without any provision being made for future clasps, and this led to complications when the medal was again issued in 1860, as will be seen later on. The Ribbon is crimson with yellow edges.

Nine Bengal and four Madras Regiments received this medal in addition to a company of Madras Sappers and Miners and some Madras Artillery.

For the Gwalior Campaign of 1843 two bronze stars were issued, one with the word Maharajpore on the back and the other with the word Punniar.

These went to the Bengal Troops of the Indian Army and are still frequently met with. The ribbon is of the rainbow pattern identical with that for Afghanistan 1842.

The medal for the Scinde war of 1843 was presented by the Queen and is the only instance of the British Government presenting a medal to the Indian Troops during the existence of the Honourable East India Company.

This medals is by W. Wyon and two dies were used, one having the name of the engraver at the base of the Queen's neck, and the other with the name in the field.

The medal are of No. 2 type and the majority were issued to the Bombay troops, there being only three Bengal Cavalry Regiments present and one Company of the Madras Sappers and Miners. The ribbon is of the rainbow type.

The medals for the Sikh war is of No. 4 type and is also by W. Wyon. The medal with three clasps (i. e. four battles) was earned by several Indian Regiments and by 3rd L. Dragoons, H. M. 31st (E. Surrey) and 50th Foot (R. West Kents) who were present at all four engagements. Apart from the fact that

this is a curious type of medal and that the clasps for the engagements are placed on the ribbon in the reverse order to that usually adopted, the clasp for the latest action being farthest away from the medal instead of nearest, there is nothing of particular interest in this issue. The number of medals granted was very large.

The Ribbon is dark blue with a crimson edge.

The Punjab war of 1848-49 presents no special point of interest, about 35000 Goojerat, 20000 Chilianwala and 19000 Mooltan clasps being issued. No one could earn all three clasps.

The type of this medal is No. 3 and the ribbon dark blue with yellow edges. This and the Sikh war medal are found almost exclusively with Bengal Regiments, only a few of the Punjab medal with the clasp, Mooltan being obtained by seven Bombay Regiments, cavalry and infantry.

The Indian Mutiny Medal 1857-58 was designed by Leonard Wyon son of W. Wyon. This medal bears five clasps, of which the greatest number in combination is four, Delhi, Relief of Lucknow, Lucknow and Central India, earned by about 50 Europeans and 89 Indians, the latter of whom nearly all belonged to the 3rd Company 1st Battalion. Bengal Artillery, while the remainder were artillery men of other Batteries attached to this Company.

These four clasps are very common, either separately or as a combination of the first three, the combination of the last clasp with any of the others is scarce; with very few exceptions the first three are restricted, as far as Indian troops are concerned, to Punjab Regiments and a few Bengal Artillerymen. The Central India clasp is most common with Bombay and Madras troops.

Needless to say, the most interesting clasp is that for the Defence of Lucknow.

The total number of this latter clasp issued, together with those given to the heirs of deceased soldiers, appears to have been about 1400. There were 927 Europeans and Eurasians and

765 Indians in the Residency the day after the battle of Chinhut; but of this number 230 Indians deserted during the siege. If we add the number of men killed at the battle of Chinhut (about 300) on the 30th June and whose heirs were entitled to the medal, we get over 1760 men who were entitled to the clasp, but a large number of the Indian medals were not claimed.

The number of clasps, Defence of Lucknow, issued to Indians was about 500. About 100 clasps were issued Defence of Lucknow, Lucknow; Dr. Brydon, the survivor of the Cabu Massacre in 1841 was in the Residency with the loyal remainder of the 71st N. 1 and received the clasp.

The majority of the Indian clasps Defence of Lucknow went to loyal remnants of the 13th, 41st, 48th and 71st N. I. who were formed into the 16th Rajputs after the Mutiny and received the medal in this corps.

The clasps most sought after are therefore those of H. M. 32nd Foot (Duke of Cornwall's) and the 16th Rajputs. All the Indians present at the siege received, in addition, the Indian order of Merit and counted three years service to pension.

The medal without clasp was issued to all Regiments who were engaged with Mutineers anywhere over India and in many cases is found unengraved.

The China 1857-60 medal may be briefly passed over with the remark that those who were in the China War of 1842, as well as in this campaign, did not receive the new medal but were granted a clasp China 1842 to attach to their first medal (which bore no clasp) and in addition any clasps earned in the 1857-60 war. It was however found that clasps could not be fitted to the earlier medal and Government then issued the 1860 medal fitted with the 1842 clasp. In the meantime many men had altered the earlier type of medal to take a clasp; medals therefore of both the 1842 type and the 1860 type (which is identical except for the omission of the date) may be found with the 1842 clasp attached.

As a matter of fact less than 20 Indians were entitled to receive the 1842 China clasp and these nearly all belonged to the

## **War Medals of the Indian Army.**

Madras Sappers and Miners the only Corps which was employed in both campaigns.

A detachment of the 32nd B. I. (now 3rd Brahmans) were in the 1842 campaign and a detachment of the Regiment was sent to serve with the 65th B. I. in the 1857-60 campaign, four men of this detachment had originally served with their Regiment in China 1842 and so received the clasp; the Madras S & M medals would have the 3 clasps China 1842, Taku Forts 1860 Pekin 1860.

There remain three medals to notice to bring our medals down to recent times. These comprise.

- (1) The Indian General Service Medal of 1854 to 1893 with 23 clasps;
- (2) The Afghan Medal 1879-80; and
- (3) The Indian General Service Medal 1895 to 1901 with seven clasps.

Of the first Medal a combination of seven clasps is believed to be the largest obtained, and this is in a Mountain Battery, but the combination is possible for the 5th Gurkha Rifles. The Mountain Batteries, however, have all the biggest combinations of clasps.

Amongst the 23 clasps, that of Pegu is fixed on the medal and I have never yet been able to discover what happened if another clasp were issued; but I believe that no other combination of clasps could have been earned by one of the recipients of this clasp.

The other clasps are Persia (mainly to the Bombay Army); North West Frontier, a rare clasp for the earlier campaigns, and was given for 18 different frontier campaigns between 1849 and 1870, but only issued to survivors in 1869 and 1870 (Bengal and Punjab troops); Ambeyla, to Punjab troops; Bhootan (Bengal and Punjab troops), Looshai, ditto; Perak (Gurkhas and Madras Sappers), Jowaki, Punjab, Naga, Gurkhas; Burma 1885-87, not less than 80,000 issued to all presidencies; Sikkim, two Bengal Regiments; Hazara 1888, Punjab; Burma 1887-89, innumerable to all presidencies; Chin Lushai, to all Presidencies; Samana 1891, Punjab; Hazara 1891, Punjab; N. E. Fron-



tier, to all three presidencies; Hunza, very rare, to details of three regiments; Burma 1889-92, a very large number; Lushai 1889-92, a good clasp for many regiments and scarce except to Military Police; Waziristan 1894, Punjab; Chin Hills, 1892-3, fairly scarce; Kachin Hills 1893, very scarce.

It can be seen what a number of interesting combinations amongst these clasps may be found, some are very scarce and to mention a few: Samana 1891, Hazara 1891 was obtained only by one British Regiment (K. R. R. C.) the 22nd Mountain Battery and 19th and 27th Punjabis; only 100 clasps of the combination Burma 1889-92 Lushai 1889-92 are known. No troops received both Chin Hills, Kachin Hills, but 103 were earned by the R. I. Marine.

The Naga and Hunza clasps were received only by Indian troops and their officers. The design of the original medal was by Leonard Wyon, the ribbon is crimson with two dark blue stripes.

Of the third Medal the valuable clasp is Defence of Chitral by 14th Sikhs (99 issued) and still more scarce the combination, Defence of Chitral, Punjab Frontier of the same Regiment.

In Waziristan 1901-02 only Indian troops were employed; there were a few British signallers but no British units were present. The ribbon bears three red and two green stripes.

This is the only ribbon that represents two different medals. With the first six clasps the medal bears the head of Queen Victoria and the reverse has the date 1895.

The seventh clasp when issued to an officer or soldier not already in possession of the medal, was issued with a medal bearing the head of King Edward VII, the reverse being the same as that of the 1895 medal with the date 1895 omitted.

The Afghanistan Medal bears six clasps of which the largest combination is four, Paiwar Kotal, Charasia, Kabul and Kandahar, together with Lord Roberts' Bronze star.

This combination was received only by the 5th Gurkha Rifles and the 23rd Pioneers amongst Indian Troops. An en-

ormous number of medals were issued without any clasp, they having been issued to about 68 Indian and 30 British Regiments.

Ali Musjid and Charasia is a very rare combination.

The Ribbon is green with crimson edges, the ribbon for the star being of the rainbow pattern.

It is impossible within this small space to mention the various medals awarded since 1901. They are commoly met with, and the Egypt medals of 1882 and 1885 with the Egyptian Bronze Star are also common. There are, however, many rare clasps on the African General Service Medals obtained by Indians of the Army who went as instructors to African troops. The Central Africa Clasp 1894-98 is occasionally met with, and so are bars Lubwas, Uganda 1897-8: Uganda 1890 and the "clasp 1898" on the West and Central Africa Medal.

Although not strictly a war medal, not the least interesting of many of the medals which have not been mentioned, is the one which Lord Clive struck and conferred on the Indian officers of two sepoy Regiments in 1766 as a reward for their conduct in assisting him to overawe the British troops on the occasion of the Monghyr European Mutiny on the question of double batta whilst on service.

For details of the earlier campaigns, "Biddulph's Indian War medals" reprinted from the Royal Engineers Journal and published by the Royal Engineers Institute Chatham is of great interest.

Although written mainly for British Troops, the information where given, regarding Indian Troops is accurate.

The book deals only with the early Indian war Medals and is out of print, but can probably be procured by Messrs. Spink and Co., Piccadilly.

The details as to Indian Regiments engaged in the various campaigns, in any of the other Medal Books published that I am aware of, are not only very scanty, but in many cases absolutely inaccurate.

The spelling of the names of the battles throughout this article is the spelling which is adopted on the actual medal clasps.

G. A. HAWKS.

## **MOUNTAIN ARTILLERY IN WAZIRISTAN 1919-20.**

By

MAJOR AND BT LT COL. A. J. FARFAN D. S. O., R. A.

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The Artillery of the Derajat Column consisted of—

No. 6 M. B., R. G. A.	four 3·7" Q. F. Howitzers,
27th M. B.	six 2·75" B. L. guns.
35th M. B.	six 10 Pr B. L. guns.

Of the above the 35th M. B., having only 10 pounders, was employed throughout the operations on the L. of C.

The remaining two Batteries No. 6 M. B. and the 27th M. B., brigaded under the command of a Lieut. Colonel styled the C. R. A. Derajat Column, accompanied the advance up the Takki Zam Valley.

### **GUNS AND HOWITZERS IN MOUNTAIN WARFARE.**

Before going into the part taken by these two batteries in the operations it would as well to discuss the relative tactical values of the gun and howitzer in Indian Frontier warfare.

The capabilities and limitations of the 2·75" B. L. gun were well known, but the 3·7" Q. F. howitzer was more or less of an unknown quantity.

The latter weapon proved itself excellent, but was found to have the following limitations—

(a) It simply could not land a shell on a knife-edge except by a very lucky chance. The gun, on the other hand with its shrapnel, although it might do little damage to the enemy, kept their heads down and enabled our infantry to assault.

(b) In a country like Waziristan which consists of hills and deep nullahs many rounds were lost, and it was no uncommon thing for the howitzers to fire twenty shell or more without a single round being seen. As many of the targets were fleeting opportunities, and had to be engaged by a couple of ranging rounds followed by a quick rate of fire at a range judged by the fall of the two ranging rounds, the howitzers were at a great disadvantage as the ranging rounds were more often than not lost.

(c) Having no shrapnel is a great disadvantage. The H. E. 106 is a good man killer but its effect is mainly lateral and therefore has no enfilade effect. In mountain warfare, more so than in any other form of warfare, opportunities arise for pushing out guns to a flank to enfilade the enemy holding such positions as a ridge. Shrapnel fired from a flat trajectory gun is perfect for this as it sweeps the whole ridge. High explosive on the other hand has only a very local effect on the spot which it hits.

(d) Artillery in mountain warfare is very often called upon to support by frontal fire an infantry attack from a flank. This is the safest form of support for guns firing shrapnel, as the shrapnel has no lateral effect and the guns can continue firing till our infantry are right up to the objective. But howitzers firing only H. E. have to stop when our infantry are comparatively far from the enemy and just when they need most help.

On the other hand the howitzer has the following advantages over the gun—

(i) A heavier shell—the difference between 20 lbs and 12½ lbs in a small shell is very appreciable.

(ii) It can fire from practically anywhere with an all round field of fire.

(iii) It has a great power of searching out nullahs and enemy behind steep cover.

As regards (iii) it must not be forgotten that the 2.75" gun has a half-charge which is extremely useful and enables the gun to be used as a modified howitzer.

The gun has a longer range than the howitzer. The 2.75" fired up to 8000 yards with H.E. and was very useful for harassing fire at localities, e. g., the shelling of Kotkai and neighbourhood from Palosina in December 1919. The maximum range of the 3.7" howitzer is 5900 yds.

From the above it will be seen that each has its special role and in order to get the full value out of both the two must be worked together.

With a view to this the batteries were usually disposed as follows—

(i) Two 2.75" guns were detached with the Advanced Guard, Rear Guard, or other independent body.

As we had very few guns it often appeared that these detached guns acting independently of the C.R.A. could have been better employed with the main body. But even if they are wasted sometimes, it is unquestionably of great advantage to the Infantry Commander on the spot to have guns under his direct command which he can order at once to fire on any points from which opposition is coming. And these detached guns being usually well up with the Infantry often have excellent opportunities of inflicting damage on the enemy by direct short range fire.

From a gunner's point of view, too, it is very satisfactory as it avoids all complaints from the infantry commander afterwards that he could not get artillery support just when he wanted it, &c., &c.

(ii) The remaining four guns and four howitzers were divided into two groups of two guns and two howitzers each. These groups proved very satisfactory and handy units. Each was under the command of one of the Battery Commanders of No. 6 M. B. or the 27th M. B. Each section of these groups was complete in itself and the Battery Commander usually confined himself to watching the tactical situation and ordering the fire accordingly by section control.

Working together like this the guns would normally engage any fleeting opportunities and generally all shrapnel targets, the howitzers being used to fire on any targets that the guns could not get at. Often the howitzers would clear the enemy out of nullahs, sangars, or from behind steep cover and the guns would get them as they bolted. Again the concentrated fire of two guns firing shrapnel and two howitzers with their high angle H. E. fire was found to be very effective.

Moreover when the howitzer got into difficulties of ranging due to rounds being lost in deep nullah country, the guns could help them out as to line and range as a shrapnel burst in the air can always be seen.

Not only in the actual firing was the combination of guns

and howitzers found so useful, but also in the manoeuvring into or out of action it was often of vital importance. For example on the 3rd March 1920 when advancing from DWATOI up the BADDAR TOI the 3rd Guides forming the Advanced Guard were held up on the ridge known as the DAM by very heavy and accurate enfilade fire from the wooded hills on the right bank of the river about three or four hundred yards off. A section of guns was ordered into action on the DAM—not at all a pleasant prospect as the ridge was a most unhealthy spot, any man showing himself there being immediately shot. Fortunately we had the howitzers which came into action in the river bed under cover and very thoroughly “crumped” the wooded hills. Under cover of this the section of guns got into action without a casualty and as soon as they were established in action behind their shields very quickly had the enemy out of it with a few rounds of shrapnel fired at point blank range.

As regards the proportion of guns to howitzers it will be a great pity if as is contemplated, the proportion is only one of the former to three of the latter. For the Indian frontier at least one gun to one howitzer is required. It is apparently again being hoped that Machine guns and Lewis guns will be able to take the place of guns, a hope which has never yet been justified, nor ever likely to be as long as the human factor remains. The moral support afforded by the sound of friendly shells, especially the high velocity shell with its peculiar viciousness and sting, is an element that cannot be ignored. Moreover it is not an exaggeration to say that the majority of infantry regimental officers who have had experience of advancing under machine gun barrages are not enthusiastic about them.

Before leaving the subject of the capabilities of guns and howitzers I would like to point out how obviously unfair it is to compare the 2.75 “B. L. gun with the 3.7” Q. F. howitzer. The former is a makeshift, being the old 10 Pr. B. L. converted on to a sliding carriage and is in no sense a modern gun, the latter is the latest thing in modern Q. F. howitzers, so in making comparisons in the abstract between mountain guns and howit-

zers the gun should be represented by a miniature improved 18 Pr Q. F.

#### **TASKS OF THE ARTILLERY.**

The tasks which the artillery of the Column was called upon to perform can conveniently be divided into four headings, viz.

- (i) Covering the advance.
- (ii) „ „ retirement.
- (iii) Protection at rest.
- (iv) Special tasks.

##### **(1) *Covering the advance.***

(a) One section of guns was normally detailed with the advanced guard. These guns were always well forward close to the leading infantry. They could thus at once help to clear away any local opposition.

They should not, however, be too far forward. The advanced guard may at any moment without warning be put on the defensive, and if the guns are too far up they will be useless and will have to retire and take up a position further back (if they can!)

The action at Aska Khan on the 14th January was an example of this when the advanced guard was unexpectedly rushed by Mahsud swordsmen. Fortunately the guns were about 400 yards behind the advanced infantry, and were able to come into action at once and render considerable help to the infantry who had been taken completely by surprise. Had they been further forward not only would they have been useless but they would have been in a very precarious position.

(b) The remainder of the guns and howitzers were employed in two groups of two guns and two howitzers each, as previously explained, and were worked under the orders of the C. R. A.

The C. R. A. was normally with the Column Headquarters, A Brigade F. O. O., detailed by the C. R. A. was always sent with the headquarters of the leading infantry brigade as liaison officer and could, if necessary, be used to direct the fire of any of the guns or howitzers. In addition to the Brigade F. O. O., the B. C. of a group often found it necessary or desirable to send

out a F. O. O. from his group either for liaison with a particular part of the infantry he was supporting or as purely an observer of fire.

For communication an artillery "trunk line" of D 5 cable was laid out by the Signals along the line of advance. It was used only by the artillery. The C. R. A., F. O. Os, and each group "tee'd" into his line, using their light cable if they were at any distance from it.

At the commencement of the advance one group was left in action somewhere in the vicinity of camp. The other group marched near the head of the main body. If more opposition was met with than the advanced guard guns could deal with this latter group was brought into action by orders of the C. R. A.

When it was established in action the rear group would be ordered forward either as a whole or by sections according to the demands of the tactical situation. If the advance was progressing satisfactorily it would come into action forward of the other group, but if the opposition was severe it would probably have to come into action more or less on a line with the other group but as much to a flank as possible in order to bring converging fire to bear.

In this way the groups advanced alternately. The final position was always, if possible, the gun park of the new camp. This allowed the establishment of the camp picquets to be covered and at the same time registration for the protection of the camp and picquets to be carried out.

*(11) Covering the retirement.*

The artillery dispositions were generally the same as for the advance, the detached section of guns being with the rear guard instead of with the advanced guard.

For communication visual signalling was principally resorted to though telephones were largely used. At the worst a few hundred yards of telephone wire might have to be left behind.

It is of great advantage for the rear guard section to have two machine guns, or failing this two Lewis guns, working directly in conjunction with it. The rear guard guns have always a



very large zone to cover and the machine guns can give very material help. In a hard pressed retirement the gun can remain much longer in action and can limber up and retire at the last moment under covering fire of the machine guns.

When covering the evacuation of a picquet it nearly always pays to have one gun ready laid on the picquet position just before it is evacuated. The tribesmen invariably rush up to it in the hopes of loot and of shooting down some of the retiring picquet from there. Even one good round fired at once will considerably check their ardour and make it easier for the picquet to get away.

*(iii) Protection at rest.*

This consisted chiefly of covering the picquets and of keeping down sniping on the camp.

For the former all important commanding point and approaches round the picquet had to be registered and both day and night lines laid out. For purposes of registration the following example will show the system used. At KOTKAI the station-call of the White Hill Picquet was WH. Round it were four or five danger points. Each was registered as WHA, WHB, WHC, &c. If threatened from any of these points, say from WHB, the Picquet Commander had only to send "WHB FIRE".

For keeping down sniping all points commanding the camp and not picquetted had to be registered. Under modern conditions it is not possible at once to establish all the camp picquets as these have to be strongly built and wired. For the first day or two in a new camp therefore the guns were kept fairly busy trying to stop the snipers.

To spot snipers good look out men are of vital importance. Not only is a very keen sighted man required but one with an imagination who can put himself in the sniper's place and look for likely places.

For these protection duties the howitzers were mostly used. With their curved trajectory they could fire all round from their gun park thus entailing the minimum amount of labour to the gunners.

(iv) *Special task* consisted of

- (a) Covering the construction of permanent positions.
- (b) Covering the destruction of enemy buildings and property.

Both these involved an advance, protection of the troops covering the working parties, and the subsequent withdrawal to camp.

The withdrawal is always hotly followed up and is best met by having the guns well dispersed on commanding points so that all nullahs, &c, down which the enemy can sneak are under observation and fire.

In the case of the destruction of village, towers, &c, one howitzer, or, if not available, one gun, should always form part of the destruction troops. It should go well provided with H. E. (both delay and non-delay). It is invaluable for the destruction of detached towers and buildings which cannot be got at without great loss of life. At short ranges (about 1000 yards) ten or a dozen rounds from a 3. 7" howitzer are sufficient to destroy the strongest frontier tower.

At longer ranges it naturally takes more rounds than at short ranges. The complete destruction of the big tower in the MAKIN Gorge by No 6 M. B. in ten rounds at a range of 4700 yards is a feat which the Battery can justly look back on with pride, but is not likely to be repeated. For a tower such as are met with in Waziristan the average amount of howitzer rounds required for its complete destruction might roughly be taken as one round per hundred yards of range, e. g., at 2500 yards about 25 rounds would be required. The gun would probably take double the amount.

#### Co-operation with Infantry.

Except by means of F. O. O's this hardly exists. There is no definite system laid down by which infantry can direct guns on to a required target.

Some simple and universal system which can be used not only by officers but by any N. C. O. in charge of a picquet or detached party is badly needed. There are many of these sys-

tems, mostly based on the clock code, but it is of no use if the system is different in each brigade or other formation as units and officers constantly change. One battalion for instance, joined the Derajat Column in January; when they left four months later there was not a single officer with the regiment who had been with it when it arrived.

There was one form of co-operation which was satisfactory. Owing to the short distances to be advanced and to being nearly always able to get a good view of the battle ground from some high hill it was usually possible to name before-hand all distinct features, such as hills, nullahs, etc. Infantry could then call for fire on any named feature or on any point with reference to it. But here again some universal system of giving the reference is required, i. e., whether to give so many yards North or South, or by means of the clock code, and if so what point is the centre of the clock and what 6 o'clock or whether to use the aeroplane method where the 12 o'clock 6 o'clock, line is represented by the North and South line, etc., etc.

#### CO-OPERATION WITH AEROPLANES.

Aeroplane observation is very useful for directing the guns on to stationary targets such as villages which cannot be observed from ground. For fleeting targets, however, the aeroplanes can do much better with their own Lewis guns and bombs.

#### BATTERY TACTICS.

For most of the targets which present themselves in frontier warfare speed is of the greatest importance. A position for the Battery enabling direct control by voice should therefore, whenever possible be selected, as this facilitates the engagement of fresh objectives and dealing with movement.

As the enemy has no artillery worth speaking of this is usually a simple matter.

Many occasions arise, however, when it is far quicker to put the battery into action on low ground and to rapidly establish an O. P. on a commanding point.

Maps suitable for artillery work are non-existent but, by means of a prismatic compass and protractor, and using the one-

## ***Mountain Artillery in Waziristan.***

man rangefinder, a map shewing the relative positions of the guns, O. P., and targets can be very rapidly and accurately made on the squared paper on the back of the signal message form. This method has the great advantage over other methods employed by artillery (e. g. the T. O. B. method) that the position of the O. P. is not restricted by its having to be visible from the battery. The O. P. can also be moved at any time to meet changes in the tactical situation, and the new O. P. plotted in on the paper.

Modern equipments tend to take longer and longer to get in and out of action; but to more than compensate for this, besides the increased fire effect, the means of fire direction and communication constantly improve. For instance-very soon every mountain gun will have a compensating dial sight, and wireless field telephones in a practical form must shortly appear.

The maximum range of both guns and howitzers is also on the increase.

The tendency must therefore be not to move guns when once they are established in action but, to move the O. P's. Especially does this apply to howitzers and it will be found well worth while paying attention to training in the rapid establishment and shifting of O. P's.

At the same time it must not be lost sight of that rapidity in coming into action will often be necessary as at ASA KHAN on the 14th January against the Mahsud rush.

### **EFFECT OF ARTILLERY FIRE.**

It is hoped that the old fallacy of the effect of artillery fire being mostly moral has now died the same inglorious death on the Indian frontier as it did in France in 1914.

On the 21st December 1919 the 300 enemy casualties on PIONEER Picquet were nearly all due to gun fire and we constantly had ample testimony from the Mahsuds that the effect of gun fire was by no means only moral.

In the early days of the campaign around PALOSINA the Mahsuds would face artillery fire and would come through a barrage. After the first few engagements they thought better of

it and as time went on they liked it less and less; latterly they would not face it at all. Surely if the effect was mostly moral the reverse would have been the case and the enemy, of whose bravery there can be no question, would have got bolder and bolder in the face of gun fire?

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## **ROADWORK ON THE SOMME IN 1916.**

(by Major A. V. Gompertz M. C., R. E., General Staff.

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- Part I. Introductory.
  - Part II. General system.
  - Part III. Preparations for the attack.
  - Part IV. Progress during the advance.
  - Part V. Adaptation to stationary conditions.
  - Part VI. Two roadwork lessons of the battle.
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Map I. Traffic map of the XVth Corps area prior to July 1st 1916.

Map II. Large scale map of a portion of the XVth Corps area October 1916, as specially prepared for and issued to road repair units as a daily appendix to works orders.

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### **PART I. INTRODUCTORY.**

**NOTE.** The detailed notes on which this article is based are not the result of long memory, but were completed in April 1917 in response to a request for an R. E. Lecture at the School of Military Engineering, Chatham.

In presenting a semi-technical report on a single campaign fought nearly five years ago, it is desirable to set forth some preface of justification for doing so. In this instance the reasons adduced as justification are:—

- (a) The Somme was the first battle of the Great War in which we attacked in great depth on a narrow front with restricted communications.
- (b) The Somme was also the first battle in the west in which we employed motor transport in great mass close up to the line.
- (c) The application of motor transport in real bulk to battle roads is a practice which in India is still in its earliest infancy, although it might increase enormously in the future should the occasion arise.

It is therefore submitted that even a five year old record bearing on the subject, whose main lessons stand as good today as they did in 1916, may be both of use and of interest.

The ground covered in this article will be the experiences in road work of the XVth Corps throughout the battle of the Somme proper, including those gained in October with M. T. roads very overloaded during winter conditions. The importance to the Corps of maintaining an immense quantity of M. T. traffic was very great; and, as the upkeep of horse-traffic roads was a far simpler affair, the bulk of the matter will concern M. T. roads.

It is proposed to give only a brief outline of conditions, problems, and measures; without deep descent into technical detail. Before commencing, however, prominence may be given to certain axioms which will explain the reasons for the more important methods of work employed. These axioms are:—

- (i) A macadam road for modern M. T. must, to carry battle weight, have a minimum of nine inches of sound soling topped with at least four and a half inches of properly consolidated metal.

In the most used roads it was found advantageous to increase these dimensions to twelve and six inches respectively.

- (ii) The greatest enemy a road can have after its construction is not traffic; but water, either moving over it or allowed to stand.
- (iii) Under battle conditions it will very seldom be possible to close a road altogether for repairs, even for only a few hours out of the twentyfour.

This fact involves the making of arrangements to carry on repairs during the current traffic, aided by strict traffic control.

- (iv) The key to all success in battle roadwork is unsparing attention to organisation.

A few preliminary words may now be said about the general condition of roads and road material in the Corps area in early 1916 and about the general problems which faced us in those respects both before and throughout the offensive operations.

**ROADS.** On our side of the line M. T. roads were notably deficient, especially in the direction of the contemplated ad-

vance. A glance at Map, I will shew this: the classification of traffic permissible on each road is an optimistic index of its bearing capabilities. Moreover the limits of the Corps area excluded both Albert and Bray, so that the great majority of its M. T. traffic was confined to the single circuit Heilly-Buire-Deruaucourt-Meaulte-Ville-Mericourt. Lorries could of course be sent over roads in other Corps' areas, but only at the risk of the consequent overcrowding of those roads getting them caught in traffic jams far away from their own area and work.

The majority of the local roads had been built as mere "dog-cart" roads, with three or four inches of indifferent soling capped by two or three inches of light metal, and fit only for light traffic and occasional farm carts. When it is realised that a modern battle M. T. road may have to carry up to 10,000 tons daily with a preponderation of heavy lorries, the difficulties that faced us become obvious. On the other side of the line the roads were almost an unknown quantity: all that was certain was that we should first meet about a two mile gap where the neglect and heavy shelling of nearly two years might necessitate the re-making of the roads ab initio.

*RESOURCES: ROAD MATERIAL Etc.* These were bad at best and the worst factor was the almost complete absence of local stone quarries. The Somme area subsoil is all chalk: such chalk made excellent soling if it could be kept perfectly dry from the moment of quarrying until it had been laid and pressed and topped with a thoroughly rainproof coating of surface metal. Exposed to the rain, however, and the rain never seemed to stop for long, it turned straightway to pure slime: resisting power nil, bogging power infinite. There was a certain quantity of hard yellow chalk close to the river that resisted wet better; but it lay mostly outside the British area, and in any case too far from the Corps area and across the main traffic routes to permit of any appreciable amount of importation. Most of such hard metal as we did obtain had to come up by rail from such distant quarries as Marquise near Boulogne, and to be handed up to



working point by lorries, light railways (and how few of these there were then ! ) , G. S. wagons etc.

Metal resources had therefore to be supplemented locally by all possible devices: see Part II-(d) later on.

It is now proposed to set forth very briefly the general system which was devised to cope with the problem of road maintenance as accentuated by these two difficulties of indifferent roads and poor resources.

#### PART II. GENERAL SYSTEM.

This may be suitably considered under seven subheads:---

- (a) Classification of roads, and traffic control.
- (b) Division of responsibilities.
- (c) Personnel employed on roadwork.
- (d) Supply of materials.
- (e) Transport.
- (f) Dry and wet weather organisations.
- (g) Auxiliary tracks.

(a), *Classification of roads, and traffic control.*

Each road was classified definitely according to the nature of traffic which it could be expected to take with the forthcoming modicum of maintenance and improvement: for the classification of individual roads see Map I. Where it was desired to use a road for a heavier kind of traffic than it was at the time fit for, it was brought up to the required standard by extra work as quickly as possible, and its bridges if any were similarly treated.

The standard classes were :—

- (i) Motor Transport. Either one-way ("Single M. T."), or two-way ("Double M. T."), according to the existing metalled width.
- (ii) Field Ambulance. These were roads which would not stand M. T. but would yet take the lighter axle-weight of field ambulances in addition to horse traffic, and thus aid materially the work of evacuation. They were also one-way or two way for the ambulance cars according to the existing metalled width.

- (iii) Horse Traffic. These were for horse foot and all horse drawn vehicles, and were always two-way save when under very heavy repair.
- (iv) Fair weather tracks for horse and foot. See sub-head (g) of this Part II, later on.
- (v) Cavalry Tracks. See again subhead (g) of this Part II.

Motorcars, light R. F. C. tenders, motorcycles with or without sidecars, and cycles were unrestricted; and could go wherever they could get, save on very exceptional occasions when heavy repair work necessitated the temporary restriction to one-way traffic of all vehicles so as to leave half the road clear. All roads were of course open to all traffic of lighter kinds than their classification standard.

The limitation of each road to its proper classes of traffic was effected by rigid traffic control. Mounted and foot traffic police were trained, and posted at all points where slackers or the ignorant might go astray: simple direction boards were erected at the turnings; and at any rate our own Corps lorry-drivers all had copies of the current traffic maps.

The only exception from these control rules consisted of vehicles actually employed on road repair. These had to be allowed free transit in all directions on roads fit to take them, to enable them to hasten the supply of material etc by plying backwards and forwards between dumps and work instead of following long circuits. They were marked on all sides with chalk shibboleths which varied from time to time to minimise unauthorised imitation, and their drivers generally carried signed and dated passes in addition. It nevertheless paid occasionally to fore go their privilege, in cases where their going against the traffic was likely to cause such delay in crowded one-way routs as to make it quicker for them to follow round the normal circuits with the rest of the traffic.

(b). *Division of responsibilities.*

The policy was to allot strictly defined areas roads or sections of roads to definite officers for definite tasks of construc-

tion repair or maintenance, for stated periods. Each of these officers then received his own personnel, transport, sources of material, and facilities.

The chain of command and responsibility up to the back boundary of Divisional areas was that the Chief Engineer of each Army laid down the general policy of roads to be kept up; and had to supply in bulk our stone metal, and such technical tools stores and plant as could not be secured from Ordnance by the Corps purchasing officer. The Chief Engineer of the Corps was, under the C. E. of the Army, responsible for the execution of Army policy in close co-operation with the Corps General and administrative staff. He received a certain supply of Army labour, free hand to get things done by his own methods and had a including complete control of local detail.

C. R. E's of Divisions were relieved of all road work save the maintenance of the roads required for horse traffic within their own divisional areas.

On January 1st 1917 a Roads Board took over all road work excepting that in Divisional areas, and pursued the original policy and methods with very slight modifications.

(c). *Personnel employed on road work.*

The policy here was to secure and employ specialist units and personnel to the utmost possible, with the double object of getting the work better done and of leaving tactical troops free for tactical duties including the very necessary one of periodical rest. The personnel generally employed was thus:—

ARMY AREA.	{	French "Service Routier".
		German prisoners.
		Labour battalions and companies.
CORPS AREA.	{	Labour battalions and companies.
		Army troops Companies and Tunnelling companies only when not required upon their own work.
		German prisoners very rarely, as the majority of the Corps work was too far forward.
		R. E., Pioneers, or Infantry from Divisions only for work of paramount urgency and in the absence of sufficient technical

troops among the Corps troops.

DIVISIONAL AREA.	{	Their own Engineers Pioneers and Infantry according to the tactical urgency of the work compared with fighting requirements.
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It will be seen from the above that within the Corps area, the only permanent roadwork units were the Labour Battalions. At the commencement of June the XVth Corps possessed much less than a complete battalion: by mid-october it had three battalions less 1 company, and even they proved insufficient to cope with the stress of winter work whilst there still remained a chance of minor operations by either side.

(d) *Supply of materials.*

It has already been mentioned that almost our entire supply of stone had to come up by rail from very far back. This meant its taking its turn with all the rest of the enormous daily aggregate tonnage of supplies, munitions, etc, on the already congested Amiens-Albert branch which could not be worked up as far as Albert until some time after the commencement of the offensive.

Road material was therefore given a definite place in the order of importance of battle stores which reserved for it a stable proportion of the daily available rail-tonnage. Special road-material sidings were next constructed at points where they were needed, as far forward as a combination of demand, terrain and tactical conditions permitted. These sidings were called "Cours" after the French, and will be so referred to hereafter. At first they consisted simply of small sidings reserved for road metal, discharging onto a yard of about the same construction as an M. T. road later, as time and labour permitted, they were furnished with platforms shaped to allow of the rapid discharge of stone by gravity from the trucks as well as the easy loading of lorries and the accumulation of a small reserve of metal without inconvenience. From the cours the stone was taken forward to the road gangs by means of lorries, G. S. wagons etc, each of which carried their own loading crew.

After the opening of the offensive however the position of the cours became rapidly too far back behind the advancing line; and the need for light railways, to relieve overcrowded roads, was severely felt in the interval which elapsed before the broad-gauge railheads were able to make an appreciable advance forward. Owing to this, as well as to a certain shortage of stone in relation to the big demands entailed by the advance of the troops, local resources, bad as they were, had to be developed to the utmost possible. This was done in seven chief ways. The object of the first four was to eke out stone to the surface of roads, and to minimise its use as soling by using as substitutes other materials which, furnishing fairly good soling, were unemployable as surface metal. These four were:—

- (i). The opening of chalk quarries for soling, and their working in proportion to current demand so as to get the chalk laid and covered before it could get wet.
- (ii). The systematic collection and employment of bricks and stone from gutted villages, by the allotment of definite collection-areas to definite units and lengths of road.
- (iii). The collection and use as soling of discharged shrapnel cases, and all other safe hard refuse of war.
- (iv). The organised collection and use of flints from the sparse flints beds in the neighbourhood. These flints were not large enough for soling, and were too angular to bind in as surface metal; but they made an excellent filling for the interstices in soling.

The next three expedients dealt with the construction, at extreme need, of metalled roads on a corduroy soling, or, for light traffic, on fascines. These were:—

- (v). The systematic collection and employment of timber from the gutted villages.
- (vi). The similar collection and use of tree trunks from the captured woods.

**Roadwork on the Sommo in 1916.**

(N. B. these contained so many bullets and shell-splinters that practically only splitting tools could be used on them).

- (vii). An organised fascine industry was started in the only unspoilt sources of brushwood, some miles behind the line; and its products came up by lorry.

There was no organised supply of corduroy logs and sleepers by rail for road work until late October, when their need was paramount.

(c) *Transport.*

It has already been stated that the policy was to give each executive officer his own allotment of available transport. This applied equally to the corps Chief Engineer: it was found essential to allow him his own transport for road work, water supply and all the other engineer work. The amount varied with the fluctuations of supply and demand, but the vehicles were at his own disposal and untouchable by other folk when once allotted. For all classes of engineer work his daily allotment of standard vehicles varied normally from 30 to 110 3-ton lorries, as well as from 30 to 160 G. S. wagons. When any of our few steam-rollers had to be used at a distance from the available sources of water, there were in addition Tank lorries with their own pumps to feed the rollers. Regimental transport of all kinds was also impressed into the service by road units to such extent as they could spare it from their daily needs of rationing etc.

(f). *Dry and wet weather organisations.*

It has already been pointed out that the worst enemy of all roads is water. Moving, in the shape of falling or flowing rains, it washes away the binding material, and thus allows the surface to break up quickly under heavy traffic till it churns up like porridge. Standing, in pools depressions or as mud, it softens the hard surface of the road by percolation and produces the same effect. As soon as it gets through the binding coat it also softens the earth below the soling, causing subsidences; and, if the soling is of chalk, the water softens it until the whole road gives way.

Drainage work and the speedy repair of damaged patches were always therefore of the first importance, whether in dry or wet weather; but in the latter the addition of a different and supplementary organisation was necessary.

This consisted of road sweeping gangs, armed with mud-scoops, mudscrapers, brooms, shovels, and any other implements which could drive or remove mud and water from the surface of the roads into the side-drains and keep those side-drains functioning properly. Such repair and construction work as could be carried on simultaneously went on too; but the drying out of the roads was the first essential, and was given temporary priority of all other work by the road gangs. Stores of the requisite implements were maintained locally at convenient points; and at the first fall of rain they were distributed to all roadwork units, and returned to the road-tool dumps at the close of the day's work.

(g). *Auxiliary tracks.*

It was found essential, in order to promote the quick circulation of motor transport and to ease the execution of repairs, to keep all other traffic off the M. T. roads whenever dry weather allowed of it. "Fair weather tracks" were therefore made alongside each M. T. road, kept in the roughest of repair, eased by ramps where they crossed raised or sunken metalled roads; and the traffic Police diverted onto them everything save petrol or steam driven vehicles and ordinary cycles.

In addition to these tracks for horse and foot traffic, special ones of great width were cut right across country from very far back, to allow of the unhampered advance into the tactical area of cavalry in bulk. These were cut, flagged, and maintained, by cavalry and R. E. Field Squadron labour.

It was found that the placing of brushwood mats at the junctions of tracks and metalled roads shook off a great deal of the mud from the hoofs of animals coming off the tracks, and thus materially reduced the amount of mud on the metalled roads.

All these fair weather tracks justified their making a hundred

**Roadwork on the Somme in 1916.**

times over; and they should not be forgotten in Indian campaigns where there is a chance of rain and where mountainous passes or cliffside roads do not render their construction impossible.

**PART III. PREPARATIONS FOR THE ATTACK.**

1. Classification of roads, improvement of standard and of bridges where necessary, and institution of traffic control. (See Part II-(a) ante.).

In some instances complete new stretches of road with the requisite bridges had to be constructed.

2. Construction of cours to adjoin railway sidings at selected points, with the necessary approach-roads. (See Part II-(d) ante). In addition to stone cours the Corps road units had also to construct yards and approach roads for the special sidings for supplies, ammunition, Casualty Clearing Stations etc.
3. Thirdly efforts had to be made to accumulate as great a reserve of road metal as far forward as possible, so as to be able to cope subsequently with the enormous extra strain that the coming offensive must throw on the forward roads. The reserve actually accumulated was, as a matter of fact, very limited owing to two adverse factors:—
  - (i) The limited supply of stone coming up from the rearward quarries for all purposes; and
  - (ii) The very heavy maintenance expense of metal in the tactical area owing to the extra movements involved by the impending attack, and also to the then shortage of light railways.
4. The next step consisted of the arrangements to adapt road work from the routine of preparation to the following up of a successful attack.

With this end in view, every unit detailed for roadwork after the launch of the offensive received as full instructions as possible regarding the whereabouts and detail of its future work, sources of material, transport, etc, which were to come into force on receipt of telegraphic orders. The time for change of



task of each unit was to come about at varying intervals after zero, roughly dependent upon the distance of that unit's work from the old front line.

Some of the further forward units were allotted temporarily to the C. R. E's of fighting Divisions from zero onwards, to revert to Corps control as soon as work had been properly started. The object of this was to permit officers close to the line to concentrate labour straightaway onto such road work in the battle area as might be necessitated by the tactical situation secured in the attack. Units such as Tunnelling Companies, whose own work ended at zero (save for the detailing of small parties to deal with unexploded enemy mines and land-traps), were usually so allotted.

The general principle of these arrangements was to ensure that no one wasted a working moment in doubt or idleness; but that all should devote every effort to their current work until the line was definitely broken, and should then switch their full energy without loss of time on to the correct following up of the attack.

5. The fifth and last chief preparative measure, (omitting from this article such technical matters as the special training of road units in high-speed technical repairs of the kind likely to be necessary after the attack), related to "Road intelligence"; and was the collation sorting-out and distribution of all information received as to the state of roads and road resources in enemy territory.

Our aircraft reported on all important visible enemy road work: any extracts from captured enemy reports which related to roads were transmitted to us by the Intelligence Staff; and the French furnished details of the pre-war standard of neighbouring roads and of the few and meagre quarries that were known to exist in the neighbouring enemy territory. For the bridging of the larger gaps that might be met with, G. H. Q. published lists and working drawings of the standard quick-erection bridges that were kept ready in numbers at the Bases, issuable immediately on the telegraphic demand of Chief Engineers of Armies.

#### **PART IV PROGRESS DURING THE ADVANCE.**

This may be conveniently considered under the following three subheads:—

**Roadwork on the Somme in 1916.**

- (i) Work at the start.
  - (ii) Classes of roads found on advancing and methods of work found necessary on them.
  - (iii) Chief road work difficulties during the advance.
- Technicalities will be avoided as far as possible.

*(i). Work at the start.*

As soon as the tactical situation was known to be adequately advanced, Corps H. Q. Sent out telegraphic orders; and units switched immediately onto their pre-allotted tasks. The Divisional troops, and the Army and Corps troops temporarily allotted to C. R. E's of Divisions, had of course already done so. After the commencement of work, the control of the non-Divisional units reverted smoothly to Corps. Further back still, the road units of Corps and Army expanded systematically eastwards, the place of Army units being filled to some extent by French civil organisations and prisoners of war.

*(ii) Classes of roads found on advancing, and methods of work found necessary on them.*

These divided roughly into three:—

- (a) Practically uninjured
- (b) Completely or partially buried by debris trench-spoil or neighbouring mines: thus preserved from damage by rain; and, when restored to daylight by excavation often ready for immediate use.
- (c) Suffering from the terrific bombardments and barages of the Somme battle until they presented all degrees of obliteration down to that necessitating practically complete re-construction.

The Corps Chief Engineer made personal inspections of as much of his road work as possible daily; and the three classes of roads mentioned above were dealt with as follows.

- (a) Practically uninjured roads were searchingly inspected: cross-sections were taken; and, if the soling and metalling were of adequate depth and quality and the surface in sufficiently good condition for the contemp-

lated class of traffic, the roads were taken into use forthwith and notified in Orders.

- (b). Buried roads were identified by map and by searching: they were then uncovered, with a minimum of pick-work and a maximum of shovel-work so as not to injure the surface; after which they were treated as in the preceding paragraph.
- (c) The treatment of badly damaged roads amounted merely to re-construction in the required degree, and so needs no comment beyond the eternal necessity of insisting upon the laying of adequate soling before superimposing the surface metal.

*(iii) Chief road work difficulties during the advance.*

These were two: very heavy traffic, and wet weather.

- (a) Heavy Traffic. This, being over 10,000 tons per day on some unfortunate roads, started a vicious circle: one so vicious that it could not be fully appreciated save by personal experience. This was:—

Damaged roads meant..... Traffic bogged or stuck, with consequent Jams. I saw one such jam of lorries more than two miles in length.

Traffic Jams meant..... Very slow arrival and consequent local shortage of repair material, also difficulty of repair by road gangs as the road was full of traffic: resulting in inadequate repairs.

Inadequate repairs meant..... Worse roads, and so on ad infinitum. It might be difficult to find a better example of a thoroughly vicious circle.

To cope with this evil and at least reduce it to a minimum, three new expedients were added to the use of rigid traffic control and of fair weather tracks. These were:—

- (a) Closing selected lengths of the worse damaged roads for notified periods to everything save road-repair

### ***Roadwork on the Somme in 1916.***

gangs and their vehicles. This was however only possible on rare occasions, as the tactical need for keeping open even the most indifferent roads was almost always paramount.

- (b) Closing one side of a badly damaged road to all but road-repair traffic. This worked much better, though it involved the temporary reduction of the road to a one-way thoroughfare only.
- (c) The use of night shifts as well as day ones for the distribution of material. Night work was tried for all kinds of road work, but proved indifferent with the single exception of drainage work. For the mere dumping at required spots of the material for next day's work, night shifts proved excellent.

(2) **Wet Weather.** This served mainly to accentuate the evils brought about by heavy traffic, by involving the admission to M. T. roads of all the horse and foot traffic that had previously been accommodated on the fair weather tracks, and so by accentuating the vicious circle already enlarged upon.

Fortunately the worst of the wet weather did not arrive until October, by which time major active operations on the Somme proper were concluded. There certainly seemed to be rain on about one day in two, but until the end of September the Picardy sun used to dry things out pretty quickly; and, with the fair weather tracks once more open for horse and foot, it was possible in the dry intervals to make up a bit of leeway with repairs to M. T. roads. Consequently the road-drying organisation already referred to, aided by a distinct increase of personnel, was able to cope with requirements fairly satisfactorily until the end of September.

In October, when the falls of rain increased and the feeble wintry sun possessed only the minimum of drying power, things were different; but that stage will be fully dealt with in the succeeding part of this article.

#### **PART V. ADAPTATION TO STATIONARY CONDITIONS.**

In the case of the XVth Corps, the inception of this process may be said to have taken place directly after the simultaneous

fall of Thiepval, Gueudecourt, and Combles, on the morning of the 26th of September.

To realise conditions that obtained at this stage, it must be understood that with the advent of late autumn, the decreased power of the sun and the increasing frequency of falls of rain gradually converted the forward area into a sea of mud through which the ribbons of road ran like causeways, whether raised or sunken. The terrific and continuous shelling of more than three months had so atomised much of the surface that the slightest fall of rain in October would produce at once the direct state of fluidity. I have seen eight horses experiencing difficulty in dragging across country a gun limber without its gun.

Although major active operations were over, minor advances had still to be carried out to secure a better front line for the winter; and at the commencement of October there was still the possibility of appreciable German counter-attacks to be reckoned with. Consequently the general situation as regards roads amounted to the maintenance of much heavier traffic than in peace, in an advanced area possessing far worse roads than our pre-offensive area, and with the added incubus of having to admit all horse and foot traffic to M. T. roads almost continually.

There may have been said to be three major evils; and, before summing up, it is proposed to describe them briefly together with the steps that were taken to combat them.

(A). The first evil, due to the cessation of the summer offensive but with the maintenance as yet of much more than peace time troops in the tactical area, was the crowding up of horse M. T. in the forward area just as happens on foot guns and a busy bridge during a bad block at the far bridge-head.

This state of affairs lasted on until the setting in of wintry weather was sufficiently developed as to obviously preclude either considerable German counter-attacks or our own appreciable further advance; and could only be coped with by a further accentuation of the methods for dealing with heavy traffic together with the following two special methods:—

**Roadwork on the Somme in 1916.**

- (i) Very great increase of road repair personnel. E, g, the Order Book for October 13th shews the following units employed solely on the five-mile circuit indicated in thick black on Map II, which had at the time a great tactical importance:—

3 Coys 12th (Labour) Bn Devon Regt.

2 Pioneer Battalions.

3 Field Companies R. E.

90 G. S. wagons.

and, on the same work on October 22nd.

3 Coys Devons as before.

2 Infantry Battalions.

1 Pioneer Battalion.

1 Field Company R. E.

30 3-ton lorries.

110 G. S. wagons.

- (ii) Reducing the use of M. T. on the battered forward roads to a minimum, and making the greatest possible use of pack transport with improvised pack saddlery for the conveyance of supplies ammunition and water.

(B). Winter conditions constituted the second evil, with their inevitable allies of much wetter weather and often frost as well. The general tendency of over-loaded roads to break up developed, under these conditions, into a perfect nightmare. In addition to the depredations of mud and water, the heavy use of some of the less reliable roads, combined with rain and mud, reduced them to a state of softness where the wheel of a 3-ton lorry would sometimes crush right through metal and soling alike like a heavy skater on thin ice. Then would the lorry bog hopelessly in mother earth beneath, churning up all the neighbourhood in its fruitless efforts to get free, until a Caterpillar or may be an extra powerful lorry set it on its way again by means of a steel tow rope.

Another disconcerting factor was that with rain and mud half dried in the feeble sun, many roads got into a "tacky" con-

dition where despite all possible roads efforts at consolidation the metal would never set or bind; but, stuck on by viscous mud, would lift up on each succeeding wheel until the road became like a stretch of shingle.

This wet wintry weather was our worst *bête-noir*. It intensified the evils of heavy traffic a hundredfold, and set the already described vicious circle working at a rate which threatened utter failure from week to week. That it was staved off was only due to the loyal co-operation of every unit employed upon road work and by their apparently bottomless reserve of effort in the face of a nightmare. The M. T. roads were crowded with every class of traffic including all those which had previously used the fair weather tracks: the lorries bogged without warning on bits of road that had seemed as hard iron a week before: others bogged behind them from their consequent inability to rush the bad bits; everything was mud unfathomable, and the results on vital tactical roads were sometimes confusion worse confounded and a tendency to traffic jams that would have made an archangel scream. The work of the road units including the non-technical ones periodically detailed, and the unending patience and skill of the traffic police, combined to avert disaster; and the roads carried all they had to up till the time when real winter eased conditions by making active operations impossible.

Four important fresh measures may be singled out as our chief means of meeting the further developments of adverse conditions during October.

- (i). The "tackiness" difficulty was met head-on, after much deliberation, by the decision that the metal on the worst roads must be allowed to remain loose. The effect was got by using metal that would pass a 5 but not a 4 gauge, and it worked excellently.

This was very detrimental to rubber lorry-tyres and made heavy going for other traffic, but that could not be helped. The above metal was heavy enough to drop off the wheels before they had turn-

***Roadwork on the Somme in 1916.***

ed appreciably, so that the general surface of the road remained fairly constant.

- (ii). Frost Regulations were published, prohibiting M. T. traffic absolutely from using the roads until 48 hours after the frost had thawed.

The technical necessity for this will be readily understood by professional roadmongers, and need not be digressed into here.

- (iii). Caterpillar Tractors were stationed in proximity to notoriously bad bits of roads, to drag out bogged lorries.

As a matter of fact they tore up the already battered roads to such a degree after frequent transit that, later on, their value was deemed questionable. But they tided over one period of intense anxiety, and the means were justified by the end.

- (iv). As a last resource, corduroy was employed in bulk as soling.

Sleepers or logs were laid at 3 to 4 inches interval, at first bedded a little in the soil, but afterwards simply laid on it. The interval of 3 or 4 inches allowed some of the metal to sink in, and so gave the surface some grip on the soling. Ordinary small-gauge metal could be used, and longitudinal stringers of wood nailed or dogged to the sleepers prevented them creeping. These generally came off in the course of time, but not before the sleepers had set hard in the earth owing to the weight of the traffic. These roads gave rough travel, but they served their purpose at a time when nothing else would; and the Oversea Dominion troops could make them at eye-opening rates when left to their own officers and methods. Such road moreover lasted as long as they were ever required to.



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### ***Roadwork on the Somme in 1916.***

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(C). The third chief difficulty met with as winter and stationary conditions set in simultaneously, was a deficiency of skilled personnel of all ranks to cope with a mass of road work which had steadily increased both in quantity and difficulty of technique.

There still exists in some quarters a pious superstition that "any soldier can make a road," which may have been true in the Flandes of Marlborough's days but is monumentally false in the twentieth century. If any soldier still clings to it I advise him to break the heart of his optimism upon the problem of M. T. roads in a soft stoneless country in a villainously wet autumn. It takes a specialist to do a specialist's job, and the making of M. T. roads is essentially such a job.

By October 1916, although our own technical units had reached a high state of efficiency both from their own experience and from the teaching of the expert officers and R. E. Foremen of Works that we attached to them; the inadequacy of their numbers involved the frequent utilisation of non-technical units; and of Field Companies R. E. and Pioneers whose road training had been correctly restricted to the construction of lighter roads.

All that could be done therefore was to increase expert supervision, there was no time for further training. Additional R. E. Foremen of Works were procured, and non-technical units were milked for officers possessing road experience. In respect of the latter, units and staffs were as generous to meet the need as they were quick to realise it; and some first class men were quickly got together from the most unlikely sources.

### ***Summary of the state of affairs in October.***

The keynote of the situation at this time was that:—

*By the end of October, the pace of deterioration of the roads had become far greater than any possible pace of repair.*

The causes whose combination led to this were:—

- (a) The crowding up of troops in the forward area behind an almost stationary line; and the enormous consequent traffic.

**Roadwork on the Somme in 1916.**

- (b) A countryside now become like a marsh, which compelled the admission of all horse and foot traffic to the M. T. roads.
- (c) The depredations of continuous wet upon those roads at the same time.
- (d) The difficulty of getting adequate repairs done to the roads amongst such a volume of slow-moving and frequently jamming traffic.
- (e) The difficulty of getting enough road repair material through that traffic to the points where it was wanted.

At this last stage therefore only one further expedient remained during the then continuing shortage of light railways, which was to use corduroy soling. The efficiency of this lay in the fact that:—

*roads on corduroy soling could be constructed at a pace far exceeding that of their subsequent deterioration.*

At the end of October conditions were eased all round by the clear impossibility of further active operations in the sector by either side until the spring; and the supply of light railways began to get materially better.

**PART VI. TWO LESSONS IN ROADWORK OF THE SOMME.**

These have been selected as ones of general principle; and the many lessons learnt in roadmongering technique have been omitted as not falling within the scope of this article.

1. The first lesson, and a vital one, is that:—

*The only key to good roads is good railways.*

The pace of deterioration of battle roads under the stress of modern battle traffic has made it clear that nothing should be carried on roads which can be carried on railways.

There must of course be distribution ahead of broad-gauge railhead; but this should be carried out as much as possible by light railways with their own advanced railheads whenever the battle line is relatively stationary. The essential is not the saving of the roads themselves, but the saving of the immense amount of personnel, energy, and transportation space that are involved in an endeavour to keep the forward roads up to M. T. standard.



With an advancing line, the advance of the broad-gauge rail traffic must keep proportionate pace with that of the front line; and, if there are any appreciable halts, light railways, whose track and stock are easily portable by broad gauge lines, must be used as far as possible.

It is naturally uneconomic for broad-gauge lines to be continually advanced by short stages: inter alia the construction of railheads, sidings, approach roads etc, is not to be accomplished in a few hours even with the quickest of corduroy expedients. There are, however, in any given extent of terrain, certain definite minimum bounds which either the construction of new track or the taking into use of existing track can make economically, directly the stability of the tactical situation permits. It is for the military railway authorities to enunciate these, and the General Staff to order their execution as soon as they are tactically safe.

In the intervals, if these are of appreciable duration, repairs to existing tracks or the construction of new formation levels can well proceed so far as the enemy barrages allow; and if these are properly carried out they will effect a great saving of time in the ultimate institution of the new railhead. At the same time the energetic employment of light railways will afford the advantages already claimed for it by the saving of men and material in the upkeep of roads.

It might be added as a corollary to this lesson that the preparations for a modern advance must include those for a fully corresponding advance of the broad-gauge railways.

2. The second lesson, already touched upon in the courser of the text, is that:—

*The key to success in battle roadwork is systematic organisation with complete decentralisation of control of local detail.*

Whether the point at issue is the distribution to tasks of a brigade of labour or the sub-allotment of a small collection of transport, nothing should be left to chance in the dispositions made; but still the subordinate commanders should never be interfered with until they commence to fail. Battle roadwork is a

thing which demands the whole-time concentration of those in executive authority: their superiors can inspect their work efficiently by merely looking at it and asking a few pertinent questions. If, however, the supply of tools and materials or the allotments of transport to the executive officers fail through bad supervision or organisation, if tasks are too indefinitely allotted to permit of quick concentration on essentials, or if executive officers are taken away from their men or otherwise unduly interfered with whilst work is still satisfactory, chaos and only chaos will result.

It might perhaps be mentioned that this lesson is based on the experience of direction of a brigade of mixed labour, and not upon the point of view of the junior executive officer.

Finally, it may be interesting to note that a captured German Colonel told the French in July 1916:— "Not you, but only our own roads, stopped us at Verdun". The methods we ourselves adopted in dealing with roads were the result of an unqualified determination that the same performance should not be repeated in our own battle-piece.

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## **NOTES ON TRAINING.**

BY MAJOR F BENSON COCKE 1/94 RUSSELLS INFANTRY.

The present training manuals for the various arms are all excellent. The memoranda on Army Training, Machine Gun and Musketry Training, etc. published over the signature of the C.G.S. yearly are a most valuable addition to these manuals since they point out where principles have been misinterpreted or ignored.

And yet the fact remains that Training does not usually come up in practice to anything like the standard laid down in theory as being necessary and presumably obtainable.

That is to say there is at present a gulf fixed between the Training Staff and Units.

There are certain difficulties which units meet with and which they need help to surmount.

It is suggested that this gulf might be bridged by having a system of liaison between the Training Staff and Units. Inspections, should be held most certainly as at present to test units' progress and the standard of efficiency of the army, but supplement this during the training periods by visits from selected officers of the Training Staff, who should come round solely to advise and help units to get round their difficulties.

It should be understood that these officers will submit no report on units, good or bad; if they make any sort of report after such visits, it must be solely to bring to light something which units want done to assist them.

C. Os. should be able to look forward to these inspecting officers visits, so that they can put all their difficulties before them and get help and practical sympathy.

There are many reasons why units cannot make their practical training approximate to the theoretical standard, It is not worth while enumerating any here, but it might be mentioned that it is seldom if ever due to lack of energy or interest on the part of C. Os., Sometimes perhaps, especially under peculiar and local conditions nothing could be done to help a unit, more often practical assistance could be given; in every case however the

***Notes on Training.***

fact that a Training Staff officer really saw his difficulties from the regimental officer's point of view would be worth a lot to the regimental officer, it would encourage him to go on and make his task seem less heart breaking than it often appears to him.

If the present Training Staff is inadequate to allow of these tours being carried out, it would pay well to increase the staff, but such inspecting officers must be carefully chosen and they should not be too junior as if they are they will have not sufficient weight or inspire confidence.

However good the Training Staff may be, their work will be largely wasted if the regimental officer does not carry out their recommendations, consequently the closer they can work together the better.

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## **SUMMARY EXTRAOTS FROM FOREIGN MILITARY JOURNALS.**

### **No. 1. *Revue Militaire General*, (Paris). *Proois & Translation.***

*May 1920.*

A notable feature is an article by Lt.-Col. de Thomasson, on the changes in the German war plan between 1870 and 1914 as exposed by General Von Kuhl in his recent publication "Der Generalstab".

The successive transformations are most interesting to follow. Immediately after 1870 the great Moltke elected for an offensive against France with a defensive Russian front; but reversed this view in 1879 owing to the quick recovery of France, her new series of fortresses in the north east, and the Austro-German alliance. Moltke's successor Waldersee made no change; and it was left to Schlieffen, that master-strategist who had never seen active service, to formulate in the nineties what eventually became, with some disastrous modifications, the actual plan on which Germany attacked in 1914.

Schlieffen's chief reasons for reverting to the original dispositions of Moltke were his self-determined fear of a French attack through Belgium what time the increased strength of France in armies and in fortification could deny to the Germans a counterstroke in Lorraine, and his poor expectation of obtaining any decisive results quickly on the Russian front. The details of his ultimate plan are worthy of note. It originated as a frontal attack upon France with an outflanking move in the north as a subsidiary inovement. Gradually however the advance through Belgium assumed more and more importance, until finally it became the main objective. The possibility of a decisive success on the Metz-Thionville line was reckoned less and less probable as time went on, until finally the frontal theory was abandoned, and the economising of forces by assigning a purely passive role to Alsace and Lorraine was made use of to swell the right wing to the utmost possible for the sweep through Belgium.

The conclusion of the Russo-Japanese war lent great strength to this plan, by reducing largely the numbers of troops necessary for the eastern front. Schlieffen himself assigned practically the whole of his first line troops to the right wing: no less than  $35\frac{1}{2}$  Corps out of 40 on the western front were so detailed, whilst 2 more out of the  $4\frac{1}{2}$  remaining in Alsace-Lorraine were to join the right as soon as the situation should allow it. Such was the German plan in 1905: a plan which General Kuhl maintains must have assured a crushing victory to Germany if it had been adhered to and acted on in time.

After Schlieffen, the younger Moltke: best summed up in the Kaiser's withering epigram "His merits matter little: I want his Name."

Under the guidance of the feeblér intellect, the plan was gradually whittled down. Firstly the holding troops in Alsace-Lorraine were increased from  $4\frac{1}{2}$  Corps to 8: next the Russia-revival called  $4\frac{1}{2}$  more Corps to the eastern front; and finally only 27 (there is an apparent discrepancy of 1 in the text here) remained as the means of striking the decisive blow. Hence the right wing ceased to be regarded as the single vital point: the detachment of more troops to Alsace and Lorraine led to the error of assigning to them an offensive rôle, and the main attack was irretrievably weakened.

The writer here makes an interesting comment. The great Moltke's original detailed plan was to pivot with his right and to drive the French into an impossible position in Belgium with his left. Lt.-Col. de Thomasson considers that no one has yet given sufficient prominence to the inherent weakness of the plan of Schlieffen and the lesser Moltke, which making the left wing semi-stationary and the right wing the moving flank, aimed only at driving the French into their own country where they might be able to fight on almost indefinitely. He also suggests that the fear of a last-moment reversion by the Germans to the far sounder plan of the elder Moltke may have helped to account for the much criticised French concentration on the borders of the Lost Provinces in 1914.

He concludes by pointing out that the forts of Belfort Epinal and Toul, although never attacked, played a sterling part in the defence of France nevertheless, by leading the great German General Staff into the very plan which ultimately brought nothing but disaster. It is an *ex-parte* article; for the Germans may well argue that their certainty that the French would concentrate appreciably towards their lost territory made it unavoidable to provide a stronger German left wing: but it is a useful addition to the study of strategy.

*JUNE 1920.*

The outstanding feature of the month's issue is the first instalment of an article by General Thevenet, who needs no introduction to military readers, on the military forces of France. The General's work is more of a treatise than an article in its completeness and its endeavour to cover every aspect of the question: it is in the main a detailed analysis of France's future requirements in the light of modern experience.

There is a little of the reactionary about the writer: he accepts the reduction of the conscript's period of service as essential to the reconstruction of France at present, requires that every moment of the shorter training must be employed to the fullest value with consequently more intensive training than hitherto, and holds that an army based on short service can only be rendered fit to take the field at a moment's notice by better arrangements for mobilisation and equipment:—"Nothing must be left to improvisation".

For the period of conscript service, the General maintains that one year is ample. Pointing out that two thirds of the French army which met the first German attack in 1914 had less than a year's service, he denies that their efficiency was due only to the war and the Cause, and is confident that alike efficiency can be reached in a year if training is taken more seriously and comprises less life in garrison towns and more time spent under canvas and on manoeuvres. Also the method of calling up recruits must ensure that not too many

are called up, and consequently dismissed, simultaneously: so that there will at every moment exist an ample force for actual frontier defence at the declaration of war, pending the completion of mobilisation of the national army. For the total period of military liability, the General sets 40 years as the age for cessation: instead of 46 as hitherto, on a strong plea that the wartime population of France must not be limited to old men, women, and children. He recommends the constitution of the national army as:—

Active Army : men of 20 to 30 years.

First reserve : from 30 to 35 years.

Second Reserve: 35 to 40 years.

and considers that the above would guarantee to France on mobilisation a total army of over four million men, which should be more than adequate to deal with Germany if the conditions of the Versailles Treaty are rigidly carried out.

The details of the scheme are worked out very fully, on the territorial basis of France's existing twenty military areas: calling-up is to be by half-classes on the 1st of April and the 1st of October each year, training and mobilisation are outlined; and, on the assumption that units of the conscript force will do tours of duty on the frontier when militarily fitted for it i. e. during the second half of their year's service, the General reckons that there will be the following force present on the frontier at all times to supplement the small permanent army there :—

- 80 Infantry battalions,
- 60 Field batteries,
- 40 Heavy batteries,
- 20 Sections of Tanks,
- 20 Cavalry squadrons,
- 20 Engineer companies.

### ***JULY 1920.***

General Thevenet's second instalment comprises his assessment of the future permanent forces.

Commencing with French North Africa, he foresees the subdivision of the present single military area into two districts,



owing to its wide extent. Algeria, Constantine, and Tunis to form one, and Morocco with Orania the other: and the system of command in each to follow the regional system of France with any necessary local modifications.

Next comes a detailed analysis of requirements, which may be summarised as follows:—(Regiments are each of 3 battalions)

(a). Colonies other than North Africa,

- 12 Colonial Infantry Regiments, of which 8 in France or on the Rhine and 4 in the Colonies.
- 6 Regiments of Senegalese, Soudanese, and Malgache light Infantry.
- 4 Regiments of Annam and Cochin-China Light Infantry.
- 4 Squadron of                      Ditto                      spahis.
- 1 regiment each of Colonial Field Artillery, and Engineers: with all French personnel.

(b). North Africa,

- 4 Regiments of Zouaves,
- 4 Regiments of the Foreign Legion
- 12 Regiments of Algerian, Moroccan, and Tunisian Light Infantry,
- 2 Regiments of Field Artillery,
- 2 Regiments of Foot Artillery,
- 2 Engineer Battalions: each comprising 2 Field Companies, 1 Signal company, and 1 Railway company.
- 4 Regiments of African Light Cavalry (French personnel).
- 4 Regiments of Native African Cavalry,
- 2 Groups of the Air Service,
- 1 A. S. C. Regiment of motor transport.

(c). Home, strategical,

- 30 battalions of Light Infantry, of 4 Companies including a machinegun company,

**Translation.**

- 2 regiments Field Artillery,
- 4 regiments Foot artillery for the Forts,
- 4 Engineer battalions, Ditto
- 4 Mortor transport groups, for the Frontier,
- 4 Air Service groups, Ditto

(d). Home, for centres of training,

- 2 regiments Field Artillery,
- 2 regiments Foot Artillery,
- 2 Engineer regiments (Field, Signals, Bridging, Railways),
- 2 big Aviation centres,
- 2 big Motor Transport Centres.

(e) . Home and Colonial Gendarmerie.

The total of these requirements is assessed at approximately a quarter of a million men, of whom 60,000 are colonial natives.

The General next briefly examines Frontier Defence: and suggests the following scheme:—

Eight Divisions between Coblenz and Mulhausen, and two in reserve for the south-east and south west. Each of these Divisions to comprise the following:—

(i). Permanent Army personnel:— Staff and service.

3 Rifle battalions.

3 Field Batteries.

1 M. T. convoy.

(ii). 1- year Conscripts during their last 6 months' training:—

- 6 Infantry battalions,
- 6 Field batteries (75's),
- 4 Heavy batteries,
- 2 Sections of Tanks,
- 2 Engineer companies,
- 2 Cavalry squadrons,

giving a total strength of about 100,000 men for the ten.

The four points of resistance in rear to be Mezieres, Metz,

Nancy, and Belfort: with special garrisons of permanent and conscript units and a reserve of technical units.

The next point treated of is organisation upon mobilisation, and the writers views, worthy of note, are broadly:—

Each pair of subdivisions within each military Region produces a complete war Division with staff and all arms and a total strength of 14,000: making 80 such Divisions throughout France: all composed of men of the Active Army between 21 and 25 years of age. In addition, each of the 20 military Regions produces in the same category 4 Infantry Regiments, 4 "groups" of three 75 batteries, 4 Heavy artillery groups, 1 Engineer battalion, 8 and Cavalry squadrons, as Army Troops or for assigning to further eventual formations; and has still left some 32,000 men of the Active Army available as first reserves, depot troops, etc.

Thus the mobilisation of the Active Army should produce, with the Frontier troops, a field army of 90 Divisions and all the necessary Corps and Army troops.

The writer refers briefly to the necessity for industrial mobilisation keeping pace with, and not suffering by, military mobilisation; and advocates leaving in the factories at any rate for some time a certain proportion of the men of the first and second reserves (ages 30 to 35 and 35 to 40).

He summarises the effect of the measures he proposes as follows:—

	TOTAL
Frontier Defence: 10 Divisions and Garrison troops.	100,000
Field Army, 80 Divisions of the Active Army.	
Field Army additional, 80 Infantry Regts. (Active) 80 R. F. A. groups. 160 Heavy batteries. 40 Engineer Bns. 80 Cavalry Sqns.	1,250,000.
(The above all composed of men from 20 to 26 years of age).	
Men of Active Army from 26 to 30 years old, as reserves and for further formations.	800,000.

***Translation.***

Men of the First Reserves, from 31 to 35 years old, for second-line units and to reinforce the first line at need.	900,000.
Men of the Second Reserve, from 36 to 40 years old, for lines of communication, and interior services and defence.	900,000.
Men under training,	220,000.
Add, for the Permanent Army, including the portions of it already on Frontier defence,	245,000.

The General adds this total up as 4,700,000: (it should apparently be nearer 4,400,000) as the total army France can mobilise at need without drawing on the resources of her Colonies for further contingents of Native troops.

***August 1920.***

The third instalment of General Thevenet's article is devoted to the question of securing and maintaining adequate establishments of officers and N. C. O's for the army he proposes.

Foreseeing a need on mobilisation for 120,000 officers and 280,000 N. C. O's he points out that the establishment of the permanent army must prove insufficient not only at the outbreak of war, but even during the annual periods of training of recruits and reservists, to meet requirements. The general principles on which he proposes to base his reserve cadres, both of officers and N. C. O's, are noteworthy.

From the permanent army, he hopes to obtain a quota in two ways. Firstly, the regular army units being under his scheme no longer mere nuclei but fully-staffed formations at war strength throughout peacetime, he considers that on mobilisation they can surrender to the newly forming units a fixed proportion of their officers and N. C. O's in exchange for men of corresponding rank from the reserve cadres. Secondly, he hopes that the offer of an appreciable pension after say ten years service, combined with the possibility of obtaining lucrative employment in civil life whilst still comparatively young, will induce a certain number of officers and N. C. O's to retire early, and

will thus build up annually a very appreciable reserve of regular personnel. To officers who do this, and presumably to N. C. O's too, he proposes the grant in the reserve of the next rank above that in which they retired so long as they had 3 years' seniority in their substantive rank. Thus a captain of 3 years seniority retiring under the scheme would automatically become a major in the reserve of officers.

This system would afford much help; but, as the writer points out, would still leave the reserve cadres very far below the necessary strength. It will therefore be necessary to undertake the creation of large reserve in peacetime from the personnel annually called up; and the principles he proposes to employ commence with the very necessary legislation to the effect that no person selected for commissioned or non-commissioned rank shall be allowed to evade their selection or the extra duties and responsibilities it entails. He goes further, and recommends that this legislation shall protect these men vis-a-vis their employers in civil life where the latter may take exception to their absence on military duty for longer periods than the ordinary private soldier.

Granted this: the raising of a reserve becomes merely a matter of selection in the hands of the military authorities. Each year certain of the conscripted soldiers, selected for their military aptitude, will be given special advanced training as N. C. O's-elect or as officer candidates. When their selection has been finally approved, they will undergo additional courses of higher instruction lasting for anything up to 45 days in excess of their ordinary period of service, at the conclusion of which they will be duly gazetted in the reserve to the rank for which they have been selected and trained. The same procedure will apply during successive recalls to duty throughout their liability to military service: men selected, trained, and gazetted as lieutenants in the reserve may, at their next periodical short training, be selected for a special additional course to qualify for captaincies, and so on up to the rank of lieutenant-colonel or even in rare cases that of colonel.

Needless to say, on the supposition of the covering legislation already mentioned, it will remain simply for the military authorities to so handle this power of selection and of training as to keep their reserve cadres of officers and N. C. O's fully up to the strength required at mobilisation, from year to year. In conclusion of the present instalment, the General lays stress on the necessity for making due return for this extra service and responsibility exacted from selected personnel; in the shape of various concessions by the State. His last sentence reads:—"The essential point is that the status of officer or N. C. O. of the Reserve must be both enviable and envied: the more this is so, the more shall we be certain of securing the sound reserve cadres we need so badly."

The financial effect of the scheme is not examined, although the writer does not forget to make clear that it must cost an appreciable sum. Apart from its possible cost, it has great apparent advantages; and we ourselves might do worse than study its details in relation to the building up of our own reserve of officers and N. C. O's, instead of relying again for our next war upon the degree of chance improvisation of 1914 which placed thousands of men in positions of responsible command totally irrespective of their own qualifications or those of the officers and men under them and around them.

*September 1920.*

The concluding instalment of General Thevenet's article touches so closely upon certain important aspects of the military situation in France today that, coming from the pen of so well known a military writer, its complete translation may be worth while.

(Translation).

The difficulties which surround today the problem of our military reorganisation arise from the fact that the problem is both a national and an international one. Consequently, a natural tendency to exaggeration must reveal it under entirely different aspects, according to the point of view that one adopts. Certain people, thinking chiefly of the overwhelming financial

charges which weigh upon France today, seek relief at any price and consider that the complete disarmament of the conquerors should be the natural corollary to the disarmament of the conquered. Others on the contrary, hypnotised by the possibility of Germany's recovery, maintain that we can never be too strong for her, and that we should keep up an army at least as strong as, if not stronger than, that of pre-war days.

Personally, I am convinced that the truth of the matter lies between these two extremes. However far we insist upon the execution of the Treaty of Versailles, Germany will remain for long years incapable of attacking us in strength. On the other hand we should be extremely unwise not to be on our guard; but this by no means entails keeping the youth of our country for years with the Colours, and an army of reduced size is a sufficient basis for preparation against all eventualities. It is possible with a (conscrip) period of service of a single year, as I have shewn in the preceding chapters, to meet our immediate necessities and to provide for the embodiment of an army of four million trained soldiers ready to join up instantly in the face of any national danger; provided however that, in addition to the year's levy actually under arms, we have a permanent nucleus of regular troops, for internal security, for the safeguarding of our colonies, to hold important points in the frontier zone, to form highly technical units, and to find instructors and staffs for the yearly conscript army.

This proviso is an essential one; and all competent authority is in agreement that if it were fulfilled, we should be in a position at any moment to inaugurate short service without fear of evil results. Unhappily, such is not the case; and the fault lies in the negligence which, in 1919, allowed demobilisation to continue from day to day without the least thought for the future, without the least endeavour to promote a proper transition from the past to the future. At that time nothing would have been easier than to retain the services of thousands of good soldiers bred by the war, men who, having neither home nor trade nor family, wonder-

ed anxiously what was to become of them when they would have to leave the regiments in which they had lived for five years. Instead of inducing any form of re-enlistment which would have given us all the regular troops we need, they were allowed to go: even the N. C. O's, the bettering of whose position was undertaken too late, were not retained; and the result has been to create a situation whose difficulties afford serious thought to those who desire to see the army quickly freed from the rut of inefficiency where it is in danger of becoming fixed.

It is undoubtedly these difficulties which have been the cause of so much hesitation, so much inconclusive debate; and, finally, Parliament has been obliged to break up for the recess without having taken in hand the project for military reorganisation which, at the time of calling up the 1920 class, it had promised to dispose of within the three months sitting.

What form will this project, which we all await so impatiently, assume? There are at present only very uncertain indications to go by, and I can hardly believe that, with the evident necessity of reducing our previous three-years service, the authorities will rest content, as the Press foretells, with a reduction to two years as it used to be before 1913 but with the additional burden of extending liability to military service up to the age of fifty years. As the question is now before us, it may be of use to pause and consider the conditions under which any return to the law of 1905 would have to be made.

(Translator's Note:—since the above was written, the French Parliament has decided on a compromise of 1½ years colour service for conscripts).

On a subject of this kind it is necessary to indulge in plain speaking, since it would take years to repair a mistake made in a day. A reversion to two years colour service may serve as a device to better temporarily the extreme scarcity of voluntary enlistments and re-enlistments and to afford an initial measure of satisfaction to public opinion; but it can not form the basis of a stable and lasting rule. With the recruits of two years serving with the colours at the same



time we can count with certainty on the permanent presence of 440, 000 men; but the measure would provide neither reliable cadres nor experienced instructors, nor yet the number of regular soldiers who are indispensable for the welding together of all the varying elements which go to make up our colonial and African armies. We shall still be always obliged to take the necessary steps to induce the enlistment of these regulars, and the 220, 000 young soldiers performing a second year's service with the colours will actually only take the place of 70, 000 re-enlisted men who, together with our regular N. C. O's, our gendarmerie and our colonial troops, could suffice as a regular nucleus whose existence would permit the reduction of colour service for conscripts to one year. Is it really worth while, when the result has not even the merit of financial economy, to demand at an age where all careers are commencing, the sacrifice of a second year's time from all our youth whose activity so badly needs an outlet in other spheres to make good the ruin of recent years?

Further, let there be no misconception, a decision for two years colour service would be only a setback to our military re-organisation; since its effect would be that, instead of attaining the Training-Machine army which the army of the future must undoubtedly be, we should once more be condemned to the old custom of a mere army of net establishment. It would not take long for us to feel the disadvantages, we should once more go through the years of bitter anxiety which followed the Law of 1905; but, now as then, from a strong disinclination to alter recent decisions, we should vacillate during long years before finally deciding to remedy the evil by recourse to a new law.

The mere announcement of a possible return to two years service would consequently fill us with just apprehension, if we had not still the hope that any proposition of this nature will meet with insuperable opposition in Parliament.

One hundred and two senators, belonging to all the different parties have actually placed before the Senate a draft law, supported by a convincing statement of objects and reasons, legislating for the reduction of colour service to one year. Aim-

amongst the signatories are General Bourgeois, General Taufflieb, and Colonel Stuhl, all well versed in the lessons of the late war; and by their side are such well known and sound politicians as M. Paul Doumer, M. Boudenoot, M. Noulens, M. Mascuraud, M. Steeg, and M. Meline. There should be little doubt but that such a powerful group should be able to command an important majority in the Upper Chamber.

From another direction, the Republican Democrat "Committee of Alliance," which numbers amongst its members all the active personalities of the Republican party from the extreme right to the extreme left, has conducted an examination of military re-organisation through the medium of a well qualified commission. The conclusion of the Commission was that, in the interests of our economic recovery, it is essential to reduce the period of colour service to the shortest possible, aiming at a single year; and the "Congress of Alliance" convoked in full sitting under the presidency of M. Jounart, adopted this decision unanimously.

The seed of one-year service has therefore been well sown; and whatever time and more or less prolonged debate may bring, one year must be the inevitable decision when Parliament holds its discussion upon the measure. Under such circumstances it is well to consider in advance one's ways and means; and, since a one-year service can assure us of all the strength we need, we should also examine how we can best apply it to our existing institutions smoothly. My intention is to do this in summary form, commencing from the standpoint of actual conditions today, and leading up to the organisation which I have already shewn to be capable of meeting all our requirements.

When the National Assembly took in hand the general re-organisation of our army immediately after the war of 1870-71 it was found necessary to recast all the existing laws; and its labours, which still serve as a model today, resulted in the Recruiting law of the 27th July 1872, the Law of the 24th July 1873 regarding the Organisation of the Army, and the Law of the 13th March 1875 dealing with establishments and strengths. These three

fundamental laws which served as the basis of all military legislation from 1873 until 1914, constituted a strongly united code; and the great mistake of the Assemblies which have modified them has lain in their interference with this unity by altering the recruiting laws without heed to the laws governing organisation and establishment. Our allowing military considerations to become unduly subordinated to civil and social considerations produced the failure of the Law of 1905: next came the reaction of 1913; whilst succeeding Decrees have aimed at adapting our army to the necessities of the late war without due regard to preserving any machinery for doing so again. As the ultimate result we have a military edifice of an instability which may cause it to crumble at the first touch of intended repair; and, exactly as in 1871, Parliament will be faced with the necessity of undertaking a complete and simultaneous revision of our laws both of organisation and of recruiting. Such a revision must necessarily take time; and if we are able from the present moment to inaugurate preparatory measures which will dovetail in with future dispositions, those measures will have given us solid value when the revision has resulted in the future laws; for those laws may then be enforced without any semblance of a leap in the dark as to their effect.

The very first measure to inaugurate consists of the completion of the efforts, made since the first discussions of the new legislation, to better the terms of voluntary enlistment and re-enlistment, and so to repair the mistake made during demobilisation. It is not a question of only retaining the services of the young men of the 1919 Class whom would otherwise return to civil life: the most important desideratum is to encourage the return to the colours of men of every Class to who no inducement was offered last year; those men who, already the victims of disappointment in civil life, may well regret their Regiments where bed and board were assured to them on honourable terms. With this end in view, it will be necessary for parliament, in conformity with the resolution of the Republican Alliance, to agree willingly to the sacrifices involved in the Budget, and to promulgate without delay a new system of voluntary enlistment and of re-enlist-

ment, upon generous terms of pay. Therein lies the gist of the whole question. It is just and it is equally desirable that the re-enlisted soldier should not be regarded as of lower caste than his comrade returned to civil life: it is equally so that the professional N. C. O. should receive the emoluments of a master-artisan. We shall get re-enlisted men enough when we pay them enough; and when, without relaxing the laws of military discipline, we accord to them all the regard and respect which is their due.

The second measure to inaugurate lies in introducing two modifications into the 'Three Years' Service Law: the first to allow the annual calling up of Classes to be made in two halves, one in April and one in October; and the second according the power to release the conscripts after at least one year's colour service, and to leave them merely available to recall during the remaining two.

If these modifications are adopted by Parliament, the census lists of the 1921 Class could be fixed now, and the work of the Boards of Appeal so advanced in the meantime as to allow the first half of the Class to be embodied on the 1st of April 1921. Between now and then, the military authorities would have time to get their training centres ready to receive the recruits directly they are called up. It would not be possible at the outset for all these centres to be established away from the towns and in the locations where their eventual permanency is desirable; but it should still be possible, by using their location to the best advantage, for them to render good service without any delay. The formation of their officer staffs could be carried out under most favourable circumstances. To constitute their staffs of N. C. O's, it would be possible to draw on our regular N. C. O's, whose diminished numbers still suffice to provide a nucleus which will grow very quickly as soon as the steps taken to better the terms of re-enlistment produce appreciable results.

During the period of organisation of the training centres, the men at present with the colours, chiefly those of the 1919 and 1920 Classes, could be grouped into a certain number of Corps at full war strength, for service on the Rhine and to meet any other

circumstances which may arise. (N. B. During the last 20 months there have been several attempts to devise measures by which this grouping can be effectively carried out without difficulties). Of these Corps, certain selected ones would be those who are eventually to form the regular portion of the national army: the 1920 Class would enter largely into their initial composition; later they would receive all the enlistments and re-enlistments brought about by the new legislation, and after a comparatively short time they would be composed entirely of regular personnel. The remainder of the Corps would at first contain men of the 1919 Class and the overflow from the future regular Corps: their utility would diminish step by step as the regular Corps became strengthened by the increasing flow of re-enlistments; and, as soon as conditions permitted, they could be gradually broken up by the transfer of the earlier Class men to the reserve. Shortly afterwards the 1920 Class would undergo similar treatment; which would then leave with the colours nothing but a single Class of young soldiers divided up between the training centres and the formations of covering troops. By this time too the troops in Africa and the Colonies would have been able to increase their strength up to the required degree; and, by the time Parliament had completed its work of reorganisation, the Service of One Year would find itself practically completely inaugurated without any brusque change. The State would moreover be appreciably relieved in respect of its military budget, without even any temporary compromise to its security.

What ever form the adoption of one-year service finally assumes, it must produce as one consequence a considerable diminution in the number of regular officers legislated for in the Law of Establishments ("Loi des Cadres"). At present, exactly opposite to what has happened in respect of the N. C. O's, the number of officers has come to exceed largely the authorised establishment. Debates in the Houses have revealed that the actual present excess is 10,000; and although one may argue in extenuation that many of them are employed in civil capacities where their services are of great value, it is none theless true that there exists

an abnormal situation, and however delicate the matter may be, the proper adjustment of the officer establishments is a matter of genuine urgency. Every perpetuation of useless practices is a danger. Officers employed under the civil administration lose their military spirit, and are wronging the civil personnel whose posts they hold. Any officers borne in excess of the strength of a unit tend to grow slack in it with no advantage to the public. Both these kinds of officers swell the military budget without return, and at the same time their very presence on the active list, modifying all the ordinary chances of promotion, causes in the corps of officers a degree of apathy and discouragement which it is useless to try and ignore. However heavy the sacrifice may be, it will have to be made; and the public authorities must find the means to effect an economy in militarily useless personnel whose capacity for work should at any rate find in private endeavour a much more attractive remuneration. A system of pensions graded by length of service and the addition of a lump sum enabling the recipients to enter civil life with something in hand appear to be the most obvious solution and most certainly the most satisfactory; but the matter must be taken in hand speedily: the longer the delay the more difficult will be the application of the remedy.

In this respect, as in all other bearing upon the reorganisation of the army, we are woefully behindhand; we are simply marking time before a problem whose solution appears to be almost indefinitely delayed. It is most urgent that we should make up our minds to attack it without further loss of time; and, after having carefully examined at any rate one of the possible solutions. I cannot conclude this article better than by quoting the words of the mover of the military budget in the Chamber des Deputés last June, M. Henry Paté:—

“ The reorganisation of our army can not be put aside any longer. The present situation must not be allowed to continue, in respect either of the term of service, of our actual strengths, or of the state of our cadres. To put it plainly, it is producing only apathy and discontent. Our young men demand to know what their

military obligations of tomorrow will be: our soldiers wish to know what their future prospects are''.

The case could not have been better put; and it is to be hoped that, in the interests of our nation at large, the words of the honorable member have not been spoken in vain.

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OF THE

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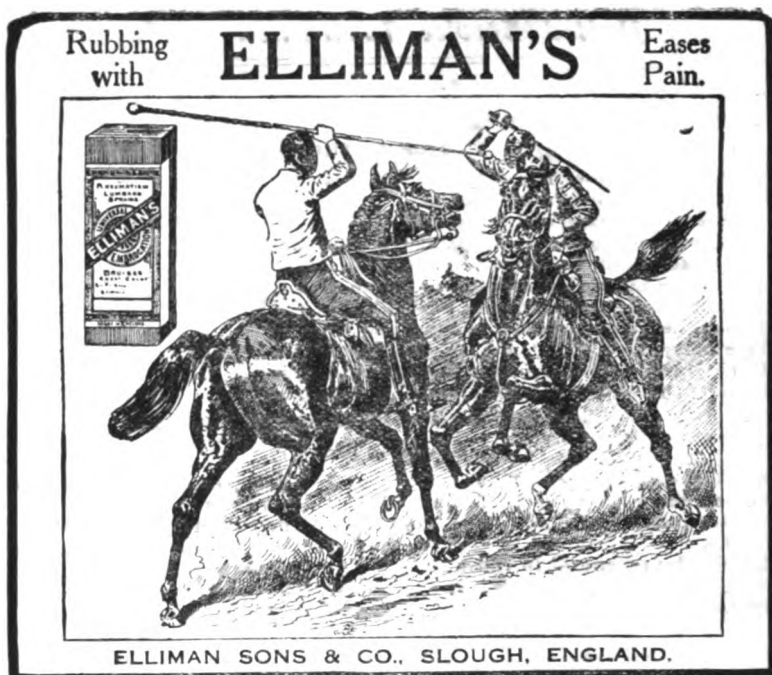
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5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in India and to all life members; but ordinary members wishing to have their journals sent to any address out of India must pay in advance Re. 1 per annum to cover foreign postage charges.
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## United Service Institution of India.

APRIL 1921.

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## **SECRETARY'S NOTES.**

### **I.—New Members.**

The following members joined the Institution between the 1st December 1920 and the 28th February 1921.

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Capt. H. S. Lloyd.

### **II.—Examinations.**

Books on Military History and Languages with Dictionaries are available in the Library and the following books which may be found useful for reference by officers, studying for promotion examinations or entrance to the Staff College have been placed in the Library of the U. S. I. and are available for use by members.

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### **IMPERIAL MILITARY GEOGRAPHY.**

Imperial Defence. By Lt.-Colonel E. S. May.  
Outlines of Military Geography. By MacDonnell.  
Imperial Strategy. By Lt.-Colonel Repington.  
Military Geography. By Macquire.  
Introduction to Military Geography. By General E. S. May.  
War and the Empire. By Hubert Foster.

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Vol. 1—Mediterranean.

Vol. 2—West Indies.

Vol. 3—West Africa.

Vol. 4—South Africa.

Vol. 5—Canada.

Vol. 6—Australia.

Vol. 7—India.



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**III.—Payment for Articles in the Journal.**

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 400 is awarded for articles and reviews published in each Quarterly Journal.

**IV.—Contributions to the Journal.**

With reference to Army Regulations, India, Volume II, paragraph 487, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Institution of India are informed, that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee. Contributors are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

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**V.—Library Catalogue.**

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**VI.—Gold Medal Prize Essay 1920-21.**

For subject and conditions please see page IV.

**VII.—Army List Pages.**

The U. S. I. is prepared to supply members and units with manuscript or typewritten copies of Indian Army List pages, at the following rates:—

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## **BOOKS PURCHASED.**

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<i>Title.</i>	<i>Sec.</i>	<i>No.</i>	<i>Author.</i>
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The General Staff and its Problems (Published 1920).	...	M. 962. (2. Vols).	Genl. Ludendorff.
The British Campaign in France and Flanders. (Published 1920).	...	M. 908.	A Conan Doyle.
The Royal Artillery Commemoration Book. (Published 1920) (Kept in R. Room).	...	M. 963.	Compiled from various sources. by R. A. O. Col. Repington.
The First World War (Published. 1920).	M.	964. (2 vols.)	
The Fifth Army in March 1918. (Published 1920).	...	M. 965.	W. S. Sparrow.
Experiences of a Dug-out 1914-18. (Published 1920).	M.	966.	Maj. Genl. Sir C. E. Callwell.
The Secrets of Crewe House.	...	N 493.	Sir Campbell-Stuart.
The Realities of War.	N	496.	Philip Gibbs.
Smila Past and present (Kept in reading Room) (Published 1904.)	...	F 363.	J. Buck.
A Naval History of the War (Published 1920).	...	P 87.	Henry Newbolt.
Whitakers Almanac for 1921.	...	O 258.	Joseph Whitaker.
Fortescue's History of the British Army Vols. 9 & 10 (Published 1920.) and I. Vol of Maps. 9 and 10.	...	O. 211.	Hon. J. W. Fortescue.
Digest of Services of the 4th Cavalry (1920).	...	O. 210.	Compiled by the Commandant.
<i>(Presented by Commandant of the Regiment.)</i>			
The Pathan Borderland. (Published 1920)	...	F. 364.	C. M. Enriquez 21st. Punjabis.
<i>Presented by Messrs. Thacker Spink &amp; Co.</i>			
{ Map Reading. (Published 1920).	{	T. 506.	John W. Cameron.
{ Lameness in Horses (Published 1920).	{	W. 58.	Major R. S. Timmins.
<i>(Both Presented by Forster Groom &amp; Co.)</i>			
Index of Language Names (Presented 1920)	R. Room.		Sir G. A. Greir-son.
<i>Presented by Govt. of India, Calcutta.</i>			
The Great War. in 1914 (Published 1921).	M.	967.	Lt. Col. F. R. Sedgwick.
<i>(Presented by Forster Groom &amp; Co)</i>			

## MILITARY WIDOWS' FUND, BRITISH SERVICE.

---

The Military Widows' Fund, British Service, was established in India in 1820 to alleviate the distress of families of officers of the British Service *serving in India*, and to enable them to return to England without unnecessary delay. Whenever an officer of the British Service, who is a subscriber to the Fund, dies, his family receives at once the following assistance, namely:—

Six months maintenance allowance ranging from Rs. 2,400 to Rs. 3,600 according to the rate subscribed, plus Rs. 1,500 as a donation for the widow, plus Rs. 500 or Rs. 300 as a donation for each child according to whether the child is over 12 and under 21 years of age or under 12 years of age.

These benefits are secured by a small subscription of Rs. 4. 3 or 2 per mensem, which is regulated by the amount of pay an officer draws. An officer, on becoming a subscriber, secures for his wife and children quite irrespective of his length of service in India, the full benefits of the Fund in case of his death after having subscribed for fully three months. In the event of an officer dying within that period, his case is specially considered by the Committee of General Management.

Copies of the regulations of the Fund and other particulars relating thereto can be obtained from the Secretary at Simla.

# United Service Institution of India.

## GOLD MEDAL ESSAY COMPETITION 1920-21.

The Council have chosen as the subject for the Gold Medal Essay for 1920-21 the following:—

### INDIA AND THE NEXT WAR.

The following are the conditions of the competition:—

- (1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army, and Royal Air Force or Indian Defence Force who are members of the U. S. I. of India.
- (2) Essays must be printed or type-written and submitted in *triplicate*.
- (3) When a reference is made to any work, the title of such work is to be quoted.
- (4) Essays are to be *strictly anonymous*. Each must have a motto, and enclosed with the essay there should be sent a *sealed* envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1921.
- (6) Essays will be submitted for adjudication to 3 Judges chosen by the Council. When the decisions of the 3 Judges are received the Committee will submit the four essays, placed first in order by the Judges, with their recommendations on the award of the Gold Medal to the Council, who will decide whether the Medal is to be awarded and whether the essay may be published.
- (7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1921.
- (8) All essays submitted are to become the property of the United Service Institution of India, *absolutely* and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (9) Essays should not exceed about 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

By order of the Council,

SIMLA,

W. L. J. CAREY, LIEUT.-COL., R.A.,

30th Sept. 1920.

Secretary, U. S. I. of India.

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The British Campaign in France and Flanders. (Published 1920).	...	M. 908.	A Conan[Doyle.
The Royal Artillery Commemoration Book. (Published 1920) (Kept in R. Room).	...	M. 963.	Compiled from various sources. by R. A. O. Col. Repington.
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		(2 vols.)	
The Fifth Army in March 1918. (Published 1920).	...	M. 965.	W. S. Sparrow.
Experiences of a Dug-out 1914-18. (Published 1920).		M. 966.	Maj. Genl. Sir C. E. Callwell.
The Secrets of Crewe House.	...	N 493.	Sir Campbell-Stuart.
The Realities of War.		N 496.	Philip Gibbs.
Simla Past and present (Kept in reading Room) (Published 1904.)	...	F 363.	J. Buck.
A Naval History of the War (Published 1920).	...	P 87.	Henry Newbolt.
Whitakers Almanac for 1921.	...	O 258.	Joseph Whitaker.
Fortescue's History of the British Army Vols. 9 & 10 (Published 1920.) and I. Vol of Maps. 9 and 10.	...	O. 211.	Hon. J. W. Fortescue.
		Books Presented.	
Digest of Services of the 4th Cavalry (1920).	...	O. 210.	Compiled by the Commandant.
		(Presented by Commandant of the Regiment.)	
The Pathan Borderland. (Published 1920)	...	F. 364.	C. M. Enriquez 21st. Punjabis.
		Presented by Messrs. Thacker Spink & Co.	
{ Map Reading. (Published 1920).		{ T. 506.	John W. Cameron.
{ Lameness in Horses (Published 1920).		{ W. 58.	Major R. S. Timmins.
		(Both Presented by Forster Groom & Co.)	
Index of Language Names (Presented 1920)	R. Room.		Sir G. A. Greir-son.
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The Great War. in 1914 (Published 1921).	M.	967.	Lt. Col. F. R. Sedgwick.
		(Presented by Forster Groom & Co)	

# United Service Institution of India.

## PRIZE ESSAY GOLD MEDALLISTS.

*(With rank of Officers at the date of the Essay).*

- 1872...ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.  
1873...COLQUHOUN, Capt. J. A. S., R.A.  
1874...COLQUHOUN, Capt. J. A. S., R.A.  
1879...ST. JOHN, Maj. O. B. C., R.E.  
1880...BARROW, Lieut. E. G., 7th Bengal Infantry.  
1882...MASON, Lieut. A. H., R.E.  
1883...COLLEN, Maj. E. H. H., S.C.  
1884...BARROW, Capt. E. G., 7th Bengal Infantry.  
1887...YATE, Lieut. A. C., 27th Baluch Infantry.  
1888...MAUDE, Capt. F. N., R.E.  
YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).  
1889...DUFF, Capt. B., 9th Bengal Infantry.  
1890...MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Contingent  
1891...CARDEW, Lieut. F. G., 10th Bengal Lancers.  
1893...BULLOCK, Maj. G. M., Devonshire Regiment.  
1894...CARTER, Capt. F. C., Northumberland Fusiliers.  
1895...NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.  
1896...BINGLEY, Capt. A. H., 7th Bengal Infantry.  
1897...NAPIER, Capt. G. S. F. Oxfordshire Light Infantry.  
1898...MULLALY, Maj. H., R.E.  
CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).  
1899...NEVILLE, Col. J. P. C., S.C.  
1900...THULLIER, Capt. H. F., R.E.  
LURBOCK, Capt. G., R.E., (specially awarded a silver medal).  
1901...RANKEN, Lieut.-Col. G. P., 46th Punjab Infantry.  
1902...TURNER, Capt. H. H. F., 2nd Bengal Lancers.  
1903...HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.  
BOND, Capt. R. F. G., R.E., (specially awarded a silver medal).  
1904...MACMUNN, Maj. G. F., D.S.O., R.F.A.  
1905...COCKERILL, Maj. G. K., Royal Warwickshire Regiment.  
1907...WOOD, Maj. E. J. M., 99th Deccan Infantry.  
1908...JEUDWINE, Maj. H. S., R.A.  
1909...MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.  
ELSMIE, Maj. A. M. S., 56th Rifles, F. F., (specially awarded a silver medal).  
1911...Mr. D. PETRIE, M.A., Punjab Police.  
1912...CARTER, Major B. C., The King's Regiment.  
1913...THOMSON, Major A. G., 58th Vaughan's Rifles (F.F.)  
1914...BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs, (F.F.)  
NORMAN, Major C. L., M.V.O., V.O., Corps of Guides  
(specially awarded a Silver medal).  
1915...No award.  
1916...CRUM, Major W. E., V.D., Calcutta Light Horse.  
1917...BLAKER, Major W. F., R.F.A.  
1918...GOMPERTZ, Capt. A. V., M. C., R.E.  
1919...GOMPERTZ, Capt. M. L. A., 108th Infantry,  
1920...KEEN, Lt.-Col. F. S., D.S.O., 2/15 Sikhs.

## MacGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June:—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—a silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief as Vice-Patron, and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.\*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.

### *Note.*

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

### **MacGregor Memorial Medallists.**

*(With rank of Officers at the date of the Award).*

1889...BELL, Col. M.S., V.C., R.E. (specially awarded a gold medal).

1890...YOUNGHUSBAND, Capt. F.E., King's Dragoon Guards.

1891...SAWYER, Major H. A., 45th Sikhs.

RAMZAN KHAN, Havildar, 3rd Sikhs.

1892...VAUGHAN, Capt. H. B., 7th Bengal Infantry.

JAGGAT SINGH, Havildar, 19th Punjab Infantry.

893...BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).

FAZALDAD KHAN, Dafadar, 17th Bengal Cavalry.

1894...O'SULLIVAN, Major G. H. W., R.E.

MULL SINGH, Sowar, 6th Bengal Cavalry.

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\*N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves; also those serving in Auxiliary Forces, such as the Volunteers and Corps under Local Governments. Frontier Militia Levies and military Police, also all ranks serving in the Imperial Service Troops.

### **MacGregor Memorial Medallists—*contd.***

- 1895...DAVIES, Capt. H. R., Oxfordshire Light Infantry.  
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896...COCKERILL, Lieut. G. K., 28th Punjab Infantry.  
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897...SWYAYNE, Capt. E. J. E., 16th Rajput Infantry.  
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898...WALKER, Capt. H. B., Duke of Cornwall's Light Infantry  
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899...DOUGLAS, Capt. J. A., 2nd Bengal Lancers.  
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900...WINGATE, Capt. A. W. S., 14th Bengal Lancers.  
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901...BURTON, Major E. B., 17th Bengal Lancers.  
SUNDAR SINGH, Colour Havildar, 31st Burma Infantry.
- 1902...RAY, Capt. M. R. E., 7th Rajput Infantry.  
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903...MANIFOLD, Lieut.-Colonel C. C., I.M.S.  
GHULAM HUSSAIN Lance-Dafadar, Q. O. Corps of Guides.
- 1904...FRASER, Capt. L. D., R.G.A.  
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905...RENNICK, Major F., 40th Pathans, (specially awarded a gold medal).  
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906...SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.  
GHAFUR SHAH, Lance-Naik, Q.O. Corps of Guides Infantry.
- 1907...NANGLE, Capt. M. C., 92nd Punjabis.  
SHRIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908...GIBBON, Capt. C. M., Royal Irish Fusiliers.  
MALANG, Havildar, 56th Punjabi Rifles.
- 1909...MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910...SYKES, Major P. M., C.M.G., late 2nd Dragoon Guards.  
(specially awarded a gold medal).  
TURNER, Capt. F. G., R.E.  
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911...LEACHMAN, Capt. G. E., The Royal Sussex Regiment.  
GURMUKH SINGH, Jemadar, 93rd Burma Infantry.



## **MacGregor Memorial Medallists—Contd.**

- 1912...PRITCHARD, Capt. B.E.A. 83rd Wallahabad Light Infantry  
(specially awarded a gold medal).  
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.  
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913...ABBAY, Capt. B. N., 27th Light Cavalry.  
SIRDAR KHAN, Sowar, 39th (K.G.O.) Central India Horse.  
WARATONG, Havildar, Burma Military Police (specially  
awarded a silver medal).
- 1914...BAILEY, Capt. F. M., I.A. (Political Dept.)  
MORSHHEAD, Capt. H. T., R.E.  
HAIDAR ALI, Naick, 106th Hazara Pioneers.
- 1915...WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.  
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916...ABDUR RAHMAN, NAIK, 21st Punjabis.  
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.)  
(Specially awarded a Silver Medal).
- 1917...MAIN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918...NOEL, Capt. E. W. C., Political Department.
- 1919...KEKLING, Lt.-Col. E. H., M.C., R.E.  
ALLA SA. Jamadar, N. E. Frontier Corps.
- 1920...BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.  
AWAL NUR, C. Qm. Havildar, 2nd Bn. Q. V. O. Corps of  
Guides. (Special gratuity of Rs. 200.)

**The Journal**  
OF THE  
**United Service Institution of India.**

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Vol. L.                      **APRIL.**                      No. 223

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**“AN EQUINE WAR HEROINE”**

“VARIETY” BY NAME

AND

*VARIETY in her Record in Peace and War.*

The above was a pony born in 1909, bred by Lord Haig's Sister Mrs. Jameson at Radway in Warwickshire, and was the progeny of a very famous huntress by a Thoroughbred Stallion.

“Variety” became Lord Haig's property, and just before the War was taken over by the 12th Lancers and played at Hurlingham when that Regiment won the subalterns Tournament at Polo.

She was presented by Lord Haig to Captain (now Brigadier-General) Douglas Baird as one of his Chargers for the War.

She was the first of the Chargers of Lord Haig's staff to embark at Southampton, and of Captain Baird's four original Chargers she was the only one left to him at the First Battle of Ypres.

She has the following Battle Honours :-

Retreat from Mons.

Battle of the Marne.

Battle of the Aisne.

First Battle of Ypres.

Neuve Chapelle.

Second Battle of Ypres.

Vimy Ridge, May 1916 (very nearly killed during the bombardment).

Battle of the Somme, July, and September to November 1916.

Battle of Messines.

Third Battle of Ypres.

Cambrai, December 1917.

She returned to India with Brigadier-General Baird in June 1918, and was present with him during the Third Afghan War 1919.

Throughout her whole service she was only once ineffective, being laid up for a week from a kick.

She is now enjoying a well earned rest, and hopes to become a matron.

Her own brother "Radway" was one of Lord Haig's Chargers, and was presented by him to a French officer on his Staff.



## **THE ADRIATIC QUESTION.**

AN HISTORICAL RETROSPECT

*By Lieutenant General F. H. Tyrrell.*

History has a knack of repeating itself and Great Britain to-day find her self once more engaged in defining the political status of the Adriatic littoral which she assisted to settle at Paris and Vienna a century ago. And her efforts were not then confined to the methods of diplomacy; her naval and military forces had taken a large share in the practical solution of the problem, and for fifty years thereafter the Union Jack floated over the key of the Adriatic, the strong and renowned fortress of Corfu.

Since the dissolution of the Western Roman Empire Venetian Frenchman, and German have lorded it over the slavonic lands at the head of the Adriatic, and disputed their possession with each other and with the Turk. For a century past Austria has owned them and her jealously denied Serbia and Montenegro the access to the sea which they needed and desired for trade and for supplies. When during the Balkan War of 1812-13 a Serbian Army had made it's way with extreme hardship and fatigue over trackless mountain-ranges to sieze the Turkish port of Durazzo, the Cabinet of Vienna forced the victors to renounce their prize under threat of a declaration of war. But with the fall of the Hapsburgh Monarchy the Slav. has come to his own again and has once more entered into possession of the lands and seas which for the past six centuries he has tilled and navigated for the benefit of alien rulers.

It is in the seventh century A. D. that the Slavs make their first appearance on the stage of European history. How long previously the Slavonic tribes had inhabited the shores of the Baltic we cannot tell: the Gothic and Hunnish invasions of the Roman Empire must have passed by them or over them; it is after the subsidence of these deluges of hunssanity that we find the slavonic tribes emerging from their native heaths and marshes and swarming south and south-east, spreading themselves over warmer and wealthier lands, from the Ural mountains to the Elbe, and from the shores of the Baltic to those of the

Adriatic. They were an agricultural people with a socialistic system of land tenure and a tribal organization, the chief of the tribe being called "Shupan"; but one powerful and able Shupan, Stephen Nemaiya played the part of King Egbert in England, and of Ranjit Singh in the Punjab in later times, and united all the tribes of the Southern Slavs in one nation, thence forth known as Servians or Serbs. The arrival of the Hungarians from Asia drove a wedge between the Northern and Southern Slavs, and the Tartar Bulgarians from the same quarter overran the most easterly of the Slav settlements whose language and culture was adopted by the new-comers, the two races becoming so intermingled as to be undistinguishable, like the Normans and Saxons in Great Britain.

Thus the Bulgarians are commonly regarded as Slavs, but in spite of the identity of language and religion there is an ethnic difference which unfortunately makes for disagreement in politics and other things. At the begining of the fifteenth century the South Slavs were united in the kingdom of Serbia stretching from the Alps to the Algean Sea; and its King Stephen Dushan assumed the title of Emperor and strove to unite all the Christian States of the Bulkan Peninsula into one Power capable of repelling the inroads of the Turks, but after his death the intervencine strife between Slavonic and Hellenic races and between Greek and Latin Churches was resumed, while the Turk won his way to the banks of the Danube and to the shores of the Adriatic, and annihilated the independent existence of Serbia on the field of Kossovo. The fall of the Hungarian Kingdom on the plain of Mohaoz was still more sudden and complete. But the Turks now came upon the Armies of Germany and the Navies of Venice, and this westward movement was arrested for a time and eventually turned back. The Croats, Dalmatians, and other more westerly of the Slavs sought shelter from the impending terror of Turkish conquest under the protecting arms of Venice and Austria. At the same time the Northern Slavs of Bohemia and Moravia were suffering at the hands of the Germans the same

fate as their southern kinsmen had endured at the hands of the Turks; and the name of Slav. became a synonym for bondservant in the languages of the nations of Western Europe.

Some Serb nobles and others who disdained submission found an asylum in the Black Mountains (Czomagora or Montenegro) and some hardy and adventurous spirits among the Slavs took refuge in the islands at the head of the Adriatic from whence they carried on a guerilla maritime warfare against the Turks on the neighbouring coast. They were known as Uskoks (refugees), and they soon made a reputation for themselves equal to that of their predecessors the Illyrian pirates of ancient history. The indented coast line at the head of the Adriatic with its numerous small islands formed an ideal area for piratical enterprise, for naval ambushes and surprises; and the first notice we get of Illyria in history is of a piratical State raiding the more civilized coast lands of Greece and Italy. Its king Agron dead of a fit of intemperance caused by joy at the news that his pirate fleet had captured and plundered the wealthy Greek city of Phenice in Epirus; and his widow Tenta succeeded to his sceptre and his activities, and had the ill fortune to incur the resentment of the Romans by murdering the ambassador whom they had sent to her to obtain redress for the outrages committed by her subjects. The action taken by Rome effectually prevented the recurrence of such outrages, and the Illyrians earned under the Roman eagles as high a reputation as soldiers as they had before enjoyed as pirates. When the Slavs came south in the seventh century A. D. they crowded the Illyrians into Dalmatia and Albania and their race probably survives in the present Albanian nation, which is still a nation of warriors whose sons have earned as high a reputation under the standard of the crescent as did their forefathers under the eagles of Rome.

The Uskoks unfortunately, did not confine their attention to the Turks but suffered themselves to be allured by the profits of promiscuous piracy. They became such a hindrance to commerce and navigation in the Adriatic that the Emperor and the Venetians combined to depose them by force into the interior of

Croatia where they were settled on the land and where their descendants may be found to this day.

The Southern Slavs were now separated into three groups, respectively subjects to the Sultan of Turkey, to the Archduke of Austria who was also Emperor of Germany, and to the Doge of Venice. They were further divided by divergence of creed: those within the confines of the Ottoman Empire retained the orthodox doctrines and ritual of the Eastern Church while the Croats and Dalmatians followed the Romish rite in communion with their German and Italian masters. In those days religion was still the dominant factor in politics, rather than nationality; and Christendom had remained disunited in the face of the Musalman invasion, through the conflicting claims of the Pope and the Patriarch. The western Powers always made religions conformity the price of their assistance, and the Eastern Christians found it easier for their conscience to serve the Turk than the Pope. The nobles in Bosnia apostatised to keep possession of their lands on the specious plea that it were better to become Musalmans than Papists; and with the title of Beys and Kapitans, lorded it over their Christian vassals. They and some of the Albanian clans furnished the only examples of a people of Aryan race voluntarily embracing the Semitic faith of Mohmmad; but the Albanian is a born fighter, and as a Christian he could not bear arms nor serve as a soldier in the armies of the Crescent, so after the death of the hero Scanderbeg had left him leaderless he resigned himself to his fate and adopted the religion of the sword. There was also a minority of Slavonic Moslems bred from the Janissaries, conscripts who had been forcibly converted to Islam, who became more Turkish than the Turks themselves, and were the most cruel oppressors of their Christian brethren. It was the outrages and excesses of these mutinous Janissaries of Belgrade that caused the Serbian national rising under Kara George in 1803 which after twenty years of alternate victory and defeat ended in the attainment of Serbian autonomy under Milosh Obrenovich.

In the seventeenth century such a thing as religious toleration was unheard of in Europe, and the idea that subjects could profess and practise a different religion to that of their rulers was unthinkable. The idea that all human beings can be made to think alike on all subjects is one of the craziest, yet one of the most universal fallacies that has ever obsessed the mind of man; yet we find it surviving even to this day in the Russian Church and in the German national system of education. In the middle ages the proposition was unquestioned; and in the Austrian dominions if a Slav was not a Catholic he had to become one or go elsewhere. The Government of Vienna carried its zeal so far as to suggest to the Pasha of Buda the desirability of suppressing protestantism in Hungary; but the Turk declined to depart from the traditional Ottoman policy of treating all sects of Christians with the same contemptuous toleration. Venetian rule was more elastic than that of Austria; Venice owned many islands in the Adriatic and the Levant inhabited by Greeks; and it was her obvious policy to conciliate them both for the sake of her commerce which was her primary concern and for fear of driving them into the arms of the Turk; in spite of the entreaties of the Papal Curia which continually urged her to enter on the paths of religious persecution.

The land forces of Venice were largely recruited from her Slav subjects, and they still more largely contributed to the strength of her Navy. At the battle of Lepanto, which Lord Beaconsfield called, "the greatest victory of modern times" and of which Cervantes said that it had "for ever dispelled the grievous error which the nations of Christendom had so long laboured in believing the Turk invincible by sea," a Dalmatian squadron formed part of the Venetian fleet. The chief reliance of Venice in war was on her naval strength and on the sinews of war, and she hired German and Swiss mercenary soldiers to serve her in her wars with the Turks.

It was under the Imperial double-headed eagle banner that the Slavs made their reputation as soldiers. The Croat light



horse served the same purpose in the Imperial Army as the Cossacks in the Russian and Polish armies, as scouts, foragers, and outpost troops; and they became as famous for their cruelty and barbarity or for their skill and activity. In the formidable Army raised by Wallenstein for the service of the Emperor in the thirty years War, they earned a great reputation under the command of Count Isolani, and on the field of Tutzon, Gustavus Adolphus "breathed his last amidst the plundering hands of the Croats." They shared with Pappenheim's Walloons the infamy of the worst excesses at the sack of Magdeburg. They served as a model for the light cavalries of Europe and there was a regiment of cavalry in the French Royal Army recruited from Croatic and styled Royal Cravettes. The neck cloth worn by its troopers gave its name and it's fashion to the cravats of the dandies of the Regency.

Albert Yelachich the Ban of Croatia at the head of his regiment of Screshans (Redmantles) did yeoman's service against the Hungarian rebels in 1849: and of all the hated Austrian troops who kept the German yoke upon the neck of Italy in the nineteenth century none were more hated and feared then "I Croatti," the most pitiless of all the pitiless beasts of the North, apostrophised by her patriotic poets.

In the year 1683 the defeat of Kara Mustafa under the walls of Vienna aroused the enthusiasm of all Christendom. Russia, Poland, and Venice formed a league with the German Empire against the infidels, and after a war that lasted for sixteen years the Turks were driven clean out of Croatia and Slavonia, as well as out of Hungary and Transylvania, and were forced to relinquish the Dalmatian hinterland to Venice. From this time onward the Ottoman Empire in Europe was confined to the limits of the Balkan Peninsula, and from being an object of fear became an object of contempt, and finally of solicitude to the Christian Powers, who tacitly agreed to tolerate the existence of Turkish rule in Constantinople rather than face the problems involve in it's suppression and transfer to another Power.

• Schiller's History of the Thirty Years War.

During the eighteenth century the political situation on the shores of the Adriatic remained practically unaltered. But at its close Napoleon Bonaparte burst into northern Italy at the head of a French Republican Army and the populace of Venice welcomed him as their liberator from the tyranny of the patrician oligarchy and the Council of Ten. The French Republic stood for liberty and the self-determination of peoples; and in spite of the horror which the doctrines and the deeds of the Revolution inspired throughout Europe, its armies were welcomed as deliverers by the peoples of the Netherlands, of Germany, and of Italy. But Napoleon's own instincts were arbitrary and monarchical; he hated the Revolution that had given him the chance of Fame and Power, like poison; and he was only awaiting the favourable moment when he should be strong enough to overthrow it. Like many another able statesman he regarded his fellow-men as a simple crowd of foolish creatures, to be tricked and cajoled into submission to the beneficent rule of a mind more intelligent and more far seeing than their own.

He had already corrupted the army by substituting glory and booty for honour and duty as its incentives to action, and he now proceeded in a similar way to corrupt the democracy of France by holding out to it the prospect of unlimited power and plunder.

By the treaty of Campo-Formio in 1897 the Liberator of Venice coolly bartered away her independence for concessions made by Austria in other respects: the city and territory of Venice was handed over to Austria while France obtained possession of Corfu and the other Ionian-Islands. The worst traditions of the old dynastic diplomacy of Europe were adopted and stereotyped by the new Republic, and Napoleon was soon able to mount to Empire on its ruins.

He was already revolving in his mind grandiose schemes of Asiatic conquests, and he looked upon the Ionian islands as stepping stones to the dominion of the East. In furtherance of these schemes he invaded Egypt suddenly in 1798 at the head of

a French army, at the same time informing the Sublime Porte that he was impelled to action by his friendship for Turkey in whose interest he was acting in freeing the province in Egypt from the tyranny of the Mameluke Beys. The Sultan replied to his mendacious insolence by declaring war against France: and at the same time the mad Czar Paul of Russia had joined the second coalition against the French Republic and had sent Suvaroff at the head of a Russian army to sweep the French Marshals from the face of Italy.

Turkey and Russia were now united in unwonted alliance for a second time† and a Russian fleet of twelve line-of-battle ships and eight frigates was fitted out and equipped in the Black Sea ports and despatched to Constantinople where it was joined by the whole strength of the Ottoman Navy. The combined fleets displaying on their flags the Cross of St. Anthew and the Crescent of Muhammad set sail from the Golden Horn Amid Salos of artillery and the plaudits of thousands of spectators lining both shores of the Bosphorus. Nelson had destroyed the French fleet at the Battle of the Nile and a British squadron was blockading the French in Malta the Russo-Turkish fleet proceeded to reduce the seven Ionian Islands in which the French garrisons, hopelessly cut off from all succour and supplies, could offer no prolonged or strenuous resistance. Meanwhile the famous Ali Pasha of Janina had mustered an army to assist in the expulsion of the French garrisons, and he laid siege to Prevesa, a considerable town and sea port commanding the entrance to the gulf of Arta which had been used by the Venetians for the control of commerce with Albania, and was now occupied by the French. Ali Pasha took the town by storm and sacked it with fury, putting the French garrison and many of the Christian

\* The first time was when Peter the Great negotiated a treaty with Sultan Ahmad III for the partition of Persia between Russia and Turkey after the fall of the Saffavi dynasty. The operations at first and for some time succeeded 'according to plan', but finally Nadir Shah expelled both Turks and Russians from the country and the ill-assorted alliance came to an end.

inhabitants to the sword. This feat of arms has been rescend from oblivion by the lines of Lord Byron in *Childe Harold* which the noble poet puts into the mouth of one of Ali Pasha's ruffianly soldiery:

"Remember the moment when Prevesa fell, the shrieks of the conquered, the conqueror's yell; the houses we fired, and the plunder we shared; the wealthy we slaughtered, the lovely we spared."

The Russian Admiral established a naval force at Corfu, and opened up communications with the Montenegrins who were always the convenient instruments of Muscovite policy. They were originally Serbian nobles and soldiers who after the fatal battle of Kossovo had taken refuge from Turkish rule in the rugged fastnesses of the Black Mountain, the Czernagora of the Slavonians and the Montenegro of the Italians, and there maintained a precarious independence in the midst of fierce foes and false friends, regarding their Catholic German and Venetian neighbours with little less antipathy than they felt for their Musalman enemies.

But when Russia joined the league of Christian Powers against the Turk after Sobieski's great victory under the walls of Vienna, the Montenegrins recognised in her 'Divine figure from the North' the champion of Slavonic Nationality and Orthodox Christianity, and hastened to place at the disposal of the Czar their lives and their swords, all that they had to offer him. During the eighteenth century the appearance of a Russian army on the Danube was the signal for a Montenegrin raid upon the neighbouring Turkish lands. Their services were now to be utilised against a more civilised and a more formidable adversary.

The second European Coalition against France had received a knockout blow at Marengo, and the Peace of Lunéville transferred the custody of Venice from Austria to France. The third Coalition was dissolved by Napoleon's crowning victory at Austerlitz, and by the treaty of Presburg Austria surrendered



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Dalmatia to France. Napoleon still had his eye on the Ionian Islands, and French troops were sent to relieve the Austrian garrisons in the Dalmatian Coast towns. A Russian agent succeeded in persuading the Slavonic inhabitants of Cattaro that French rule would be injurious to their interests, and they in revolt as a protest against their transfer: the Montenegrins came to their assistance, and compelled the Austrian garrisons to retire into the citadel, and the Russian fleet arrived from Corfu and blockaded the port. The Austrian commandant being entirely cut off from all communication, and seeing no hope of relief, surrendered the fortress. When Napoleon heard of these events, he suspected, or pretended to suspect that the Austrians were in collusion with the Russians to frustrate the French occupation of Dalmatia; and he sent orders to General Molitor who commanded the French advanced guard, to occupy Ragusa as a counterstroke to the capture of Cattaro by the Russians. The little Republic of Ragusa had enjoyed an independent existence for centuries, had flourished on its world-wide Commerce, commemorated in our word Argosy, and had succeeded by a combination of prudent diplomacy with good luck in conciliating the rivalry of Venice and disarming the hostility of the Turk. But now it was fated to perish in a quarrel with which it had no concern; the French troops occupied the city without resistance and Napoleon treated it as a part of his own dominions. The Russian fleet and the Montenegrin army moved to the rescue of Ragusa and besieged the French in the town. Napoleon sent more troops into Dalmatia and the Austrian Government, anxious to appease his resentment, sentenced the unfortunate Commandant who had surrendered Cattaro to imprisonment for life in a fortress. Marshal Mortier advanced with a French army to the relief of Ragusa, and on his approach the Russians and Montenegrins raised the siege and fell back to Cattaro, pursued by the French. It is related that a Russian Major, old and stout, was so exhausted in the rapid retreat that he sank

down unable to proceed further. A Montenegrin seeing his plight, drew his Yataghan and kindly offered to cut off his head. The horrified Russian expostulated vehemently, on which the Montenegrin sheathed his weapon, observing "What a strange man this must be, who prefers falling alive into the hands of the enemy, to an honourable death by the hand of a friend!" \*

The Montenegrins soon discovered that their strength and courage was vain against the French artillery and musketry, and that they could not hope to contend with success against disciplined troops in the open field: they withdrew into their native mountains, where the French were not eager to engage them. But if the French were to remain in Dalmatia it was necessary to destroy this nest of linnets, and Marshal Marmont was for some time busily employed in organising an army for the invasion of Montenegro. His preparations were nearly complete when he received an order from Napoleon to cease hostilities.

Napoleon and the Czar Alexander had shaken hands on the raft in the Niemen, and the Treaty of Tilsit had been signed between France and Russia. A secret article of this Treaty proposed to partition the lands of the Turkish Empire in Europe between the two contracting parties, but the destiny of Constantinople was left unsettled. Napoleon now sent orders to Marmont to collect all the information possible about routes and supplies in Bosnia, Albania, Macedonia and Thrace, as he meditated an invasion of those countries by two cooperating armies, one of them based on Cattaro, the other on Corfu. The agreement at Tilsit restored the Ionians Island to France and they were at once occupied by French garrisons.

The year 1809 saw the irrepressible Austrians once more in arms against France, and after their final defeat at Wagram

\* Black George of Topola the patriot hero of Serbia and founder of the Karageorgavich dynasty, under similar circumstances killed his aged father with his own hand, to save him from falling alive into the hands of the Turks.



they were forced to cede to Napoleon all that remained to them of the Adriatic littoral. Venice had been given up to him at the Peace of Luneville, Dalmatia at the Peace of Presburg: now the treaty of Schonbrunn or Vienna surrendered Istria, Carniola, and the coast of Croatia, with the cities of Trieste and France. Napoleon constituted all these possessions along with Dalmatia and the Islands into the Province of Illyria which he incorporated with his kingdom of Italy, ruled over by his stepson Eugene Beauharnais, as Viceroy. The Adriatic was now a French lake for all its shores were held by the French, and both Slavs and Italians found French rule more tolerable than that of the Austrian German.

Marshal Soult was created Duke of Dalmatia, and the French authorities in Illyria recruited and Musalmans from Bosnia and Albania to fill vacancies in the corps of Mamelukes which Napoleon had brought with him from Egypt, and which he had constituted as a squadron of cavalry in his Imperial guard. But the master of the shores of the Adriatic was soon rudely reminded that he was not master of its waters. A British army had been quartered in Sicily to support the cause of the Bourbon king of the two Sicilies against the French who had dispossessed him of his Kingdom of Naples and the narrow strait of Messina, when patrolled by English cruisers, was a barrier sufficient even to deter Murat from attempting to cross it. He did indeed succeed in destroying the English garrisons from the island of Capri, within view of the windows of his palace; but his one attempt to invade Sicily was shipwrecked by the vigilance of the British navy and he never ventured to repeat it. The military force in Sicily was of varying strength: sometimes it amounted to 10,000 men but it was often diminished by furnishing drafts for expeditions to Egypt on the East or to Spain on the West: about one half, of its regiments were British, the remainder were a miscellaneous lot of mercenaries, the three Swiss regiments of de Roll, de Watteville, and de Nenron, the Corsican Rangers, and a regiment of Maltese

infantry. The force once attempted an invasion of Italy, and though it proved insufficient for its purpose its victory at Maida shewed, that a Napoleon's troops were not invincible. It now furnished material for another enter prise and hardly had the French reestablished their unthority in the Ionian Islands when a British fleet under Admiral Lord Colling wood with transports carrying 1600 troops under General Oswald appeared off the coast of Greece, and attacked the French posts in the Islands. By the end of the year 1910 the British flag was flying over six of them, but at Corfu General Danzelot still kept the Tricolor flag flying over the strong fortress which a century before the gallant Count Schulemberg had so successfully defended against the Turks. In 1811 Captain Hoste with British naval squadron raided the shores of the Adriatic occupied Lissa and other Island in the gulf of Venice, and established in them depots for the contraband trade by which colonial produce was smuggled into the continent in defiance of Napoleon's Berlin decrees.

A Greek regiment was raised for the Bitish Service to assist in garrisoning the captured Islands, It's uniform was the Arnaut dress of fez cap, red Zouape jacket, and fustanella or white linen kilt. This regiment was disbuded after the general Peace in 1815, and many of its native officers and soldiers afterwards turned the lessons they had learned under the British flag to good account in the ranks of their fellow-country men in the Greek War of Independence.

The renewal of war between France and Russia in 1812 brought the Montenegrins once more into the field and British fleet into the Adriatic. The French in Cattaro were besieged and blockaded by land and sea, and their garrison surrendered themselves to the mercy of the British to escape the fury of the Montenegrins. In 1813 an Austrian Army invaded Illyria under command of General Nugent, a scion of an illustrious Irish family which has for generations distinginshed itself in military service under the Double-headed Imperial Eagle. Admiral

Fremantle with the British fleet cooperated in the reduction of the sea-ports. The fall of Trieste was decided after the siege had lasted some weeks by the explosion of the garrison's powder-magazine. Zara also stood a siege before it capitulated but the garrison of Sebenic (probably Slavs and Italians in the French service) mutinied and delivered up the fortress to the Allies. By 1814 the whole of Illyria was once more in possession of the Austrians except Cattaro which was held by the Montenegrins. General Danzelot still maintained himself at Corfu, until he received an order from King Louis XVIII to haul down the Tricolor flag and hand over the fortress and the Island to the British. He returned to France and the next year commanded a Division of d'Erlon's corps at Waterloo. The Swiss regiments of Baron de Roll in the British service took over the garrisoning of the citadel of Corfu.

At the congress of Vienna in 1815 Great Britain received what would now be called a mandate to administer the Ionian Islands, but the claim of Montenegro to Cattaro was not allowed, in accordance with the general policy which selfishly sacrificed the interests of the smaller nationalities to the greed of the Great Powers. The Montenegrins stoutly refused to surrender the town which afforded them their only access to the outside world not already in the hands of their Moslem enemies; and an Austrian army proceeded to lay siege to Cattaro and by dint of superior numbers and artillery forced the valiant mountaineers to abandon their cherished prize. But they exacted reparation for the wrong done to them in their own way and for years afterwards the head of the Austrian Grenadier continued to decorate the walls of the Prince-Bishop at Cetinje alternately with that of the Turkish Janissary.

In 1848 the year of Revolutions when the Emperor Ferdinand was forced to flee from Vienna the Croats and Slovenes loyally supported the Hapsburg dynasty and fought for its Monarchs against Italian and Hungarian rebels; but their loyalty

met with a poor reward. When the war of 1866 between Austria and Prussia for the hegemony of Germany terminated in the defeat of the former Power it left the Germans in the Austrian Empire so weakened that they could no longer hope to dominate all the other nationalities of their heterogeneous dominions as they had hitherto done: they required an ally from the subject races, and they chose the Magyar, and converted the Austrian Empire into the Dual Monarchy. The Slavs who were in a majority both in the population of the Empire and in the ranks of the Army, were left out in the cold, and given no share in the Government; and moreover their lands were divided between the administrations at Vienna and Buda-Pesth. And the effect of this measure was aggravated by the awakening of the minds of all the Slav peoples to a sense of their common racial affinity; the doctrine of Pan Slavism was preached in Russia by Aksakoff, and found a ready response in the hearts of Czech and Slovak, Croat and Slovene. They had seen Italians and Germans achieve the realisation of political as well as racial unity, and they hoped for a similar union of all the Slavonic peoples in a common confederation under the hegemony of Russia. But no Slavonic Bismarck arose to realise the dream; the rulers of Russia were only bigoted obscurantists, who looked for inspiration to the past instead of to the future, and so wrought their own ruin. But the Slavs of Central Europe have regained their long lost liberties, by the dissolution of the Hapsburg Empire, and the ancient Kingdoms of Bohemia and Serbia have again appeared on the map of Europe.

Ethnologically and geographically the boundaries of the new Southern Slav Kingdom admit of easy definition. The population of the countries of the Adriatic littoral from Istria to Dalmatia is Slavonic in race and language. But the sea-ports Trieste, Fiume, Pola, Zara, etc., have a large population in some cases a majority, of Italians, the result of the Venetian occupation for centuries; and these Latin people, mostly of the upper classes, descendants of officials and merchants, naturally

turn to Italy for the satisfaction of their political aspirations. The situation is somewhat analagous to that in Ireland, where the north-eastern province of the country is occupied by Protestant Saxons, while the remaining three quarters of the island is peopled by Catholic Celts. The two populations are moreover so inextricably mixed that it is impossible to equal justice to their political aspirations. In the good old times the only way of deciding such knotty points was the way of Alexander with the Gordian knot, the arbitrament of the sword: but it is to be hoped that with the efforts of the Supreme Council of the Peace Conference and the aid of the League of Nations the problem of the distribution of the Adriatic littoral may be solved in such a manner as may avert the otherwise inevitable conflict between Italians and Yugo-Slavs. at some future date.

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## **" TACTICAL USE OF LEWIS GUNS "**

(A CRITICISM)

By ISHMAEL.

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1 The issue of the Journal for October 1920 contains no reply to an article by Major J. G. Lecky, bearing the above title, which appeared in the number for July 1920. That is, I think, unfortunate. Major Lecky, in advocating the concentration of Lewis Guns under Company and Battalion Commanders as a normal organization, is by no means alone in holding the views he expresses, and his argument is sufficiently well stated to require some notice. For, unless we examine carefully the premises on which that argument is based, we may be tempted to accept his conclusions. My endeavour will be to show that those conclusions are false and for the reason that the premises are unsound.

It would not be difficult to invoke the aid of authority and to annihilate Major Lecky with a barrage of quotations from the official manuals. It will be more provoking perhaps to Major Lecky's supporters to base criticism on an argument developed from first principles.

2. Yet we must agree in the great measure with the intention underlying Major Lecky's article. The problem of the Lewis gun cannot, as he justly says, be dismissed with the statements, " the Lewis gun is a platoon weapon", " in attack the Lewis gun goes forward with its platoon in one or other of its flanks". The role of the gun requires to be more elastic, it can and should play many parts, more especially in hill warfare. Nevertheless, I shall endeavour to show that, even in transborder hill warfare, the Lewis gun is essentially a platoon weapon and that Major Lecky's conclusions, which require the collection of the Lewis gun sections in Lewis gun platoons or companies, are based on a misconception of the nature and handling of the weapon, a misconception which, if I may venture to say so, is all too common in this country.

3. I have suggested that Major Lecky is incorrect in his premises. His initial error lies to my thinking in his conception of the characteristics of the gun as compared to the rifle.

Those characteristics he considers to be :—

- (a) volume of fire,
- (b) accuracy,
- (c) lack of mobility,
- (d) uselessness for shock action,
- (e) inability to fire while advancing,
- (f) difficulty of ammunition supply.

4. From the above he arrives at the conclusion that the proper role for the gun in attack is covering fire, using the term in the restricted sense of covering fire, usually overhead, from medium or long ranges; from 500 to 800 yards is suggested as the most suitable range; fire, at any rate from outside the zone of the platoon which the gun supports.

It is necessary to make this definition since the manuals also speak of the covering fire of Lewis guns, but in the sense of fire from within the platoon area, usually from a flank, as illustrated by the typical platoon attack on a strong point which is familiar to us from "Platoon Training."

5. Let us then examine the Lewis gun as a covering fire weapon in the special sense defined above. What do we require from such a weapon? First, we require a power of sustained fire, not continuous fire necessarily but fire in long and frequent bursts continued over a considerable period, since each gun must keep the enemy down continuously over a definite frontage throughout the advance to close quarters. We require in fact endurance and a large supply of ammunition.

Does the Lewis gun with its delicacy, its rapid overheating and its comparatively small ammunition supply meet these requirements? The answer is, "No".

What else do we require? Extreme accuracy, and especially accuracy at long ranges, since we must fire from long ranges in

order to clear the heads of the Infantry and in order to be able to continue our fire until the last possible moment. Major Lecky considers the Lewis gun an accurate weapon. Few officers will be found on reflection, to agree that the gun reaches a sufficiently high standard of accuracy and steadiness for overhead work in normal warfare, if so indefensible an expression a "normal" warfare may be used to indicate warfare in more or less plain country. In the hills, of course, the ground will often permit of overhead fire from both rifles and Lewis guns until a late stage of the attack. But the point I wish to make is that *in normal warfare* the Lewis gun is quite unsuitable for such fire, while in the hills it is far inferior to the machine gun for the purpose.

6. Major Lecky, arguing correctly on the basis of characteristics (c) (d) (e) and (f) as enumerated by him, considers the Lewis gun to be, to a great extent, out of place in the leading platoons. I maintain that the characteristics as formulated by Major Lecky give an altogether false view of the gun.

Let us then examine them.

As regards mobility: the Lewis gun is not ideal, it is a somewhat clumsy weapon, its ammunition is in an inconvenient form. But no Lewis gunner worth his salt will admit that he is unable to keep up with the rifle sections over any ground. Nor need the Lewis gun section be inferior in mobility to the average rifle section if the personnel are well selected, well trained and correctly equipped.

7. Then again we are told that the Lewis Gun section is "useless for shock action". I think we are inclined to make this one of those catch-words which Major Lecky so rightly deplores. It is true that the gun itself is useless for shock action. It is true that we cannot and should not expect the Lewis Gun personnel to go in with the leading wave of assault, even though, as is sometimes forgotten, that personnel includes some five good rifles. But 90 per cent of assaults will be won before we get to bayonet distance; and in the remaining 10 per cent, if we are determined to go in, we shall succeed, and the fact that a couple of men in



the platoon are without bayonets, or that one section is a few paces behind the rest, will not stop us. At the moment of assault the Lewis gun by its fire may indeed be worth many bayonets.

Let us then train the Lewis gun sections in the offensive spirit, the desire to kill with Lewis gun, rifle, bayonet, or bomb as the situation demands; and let us be careful that we do not, by loose thinking, convey a false impression when we speak of the "Lewis Gun" as "useless for shock action."

8. We next come to the gun's "inability to fire while moving". This sounds well. But there is little in it. The sound is decidedly hollow. No arm except the tank can effectively combine simultaneous fire and movement. But, most of all weapons, the Lewis Gun, when in movement can halt and immediately open intense fire on a fleeting target. Let us therefore substitute for this characteristic another, namely "ease of control and power to open intense fire rapidly on the target indicated".

9. Finally we come "difficulty of ammunition supply". Here I have no difference of opinion with Major Lecky. Ammunition supply is a difficulty inherent in all automatic quick-firing hand-guns, and it will always necessitate the use of these weapons as weapons of opportunity.

10. Let us then restate the characteristics of the Lewis gun as follows:-

- (a) Power of delivering intense fire for short periods from a narrow front.
- (b) ease of control, and power to open intense fire rapidly on the target indicated.
- (c) accuracy by day and night equal but not superior to good rifles.
- (d) mobility almost, but not quite equal to that of well trained riflemen.
- (e) ammunition supply a difficulty.

To which we should make two most important additions:-

- (f) Ease of location and concealment compared with an equivalent number of rifles, and ability to shelter behind the minimum of cover;
- (g) Zone of fire narrow but deep.

The list is not exhaustive but it gives us the key to the nature of the Lewis Gun:-*viz*

An infantry weapon of opportunity, especially useful for increasing the fire power of parties of infantry working on a narrow front; deadly in enfilade: above all things, a rifle, not a gun.

11. How does this work out in practice? Let us follow Major Lecky again in his argument.

First then in attack. In normal warfare the Lewis gun cannot use over-head fire. It must therefore move where it *can* fire. Where is that? The answer is; with the leading platoons, either in front, or to a flank where its power in enfilade can be employed. In hill warfare on the other hand positions can generally, but not always, be found for overhead fire. But can the Lewis gun always take advantage of opportunities if kept far back? Who is in immediate touch with the fight? Who sees best the fleeting opportunity, the sudden and imminent danger; and, it provided with the means, who is best placed instantly to meet it? The answer in almost every case is, the platoon commander; and the weapon most suitable, indeed the only weapon suitable, to meet the emergency, to take advantage of the opportunity, is the Lewis gun. Again, in hill warfare; from what position in the fight can the Lewis gun, with its comparatively short range, best obtain opportunities for fire in enfilade? The answer is; within the zone of the leading platoons

And yet again. In transborder warfare, at what moment in the fight can we hope to hurt the enemy most, that is, to kill him? During the pursuit by fire. That is the movement for the Lewis gun. It will be the opportunity of a moment. A wasted opportunity, if the Lewis guns are too far back to take advantage of it.

12. In normal warfare, as Major Lecky says, the next danger is counter-attack. Here again the Lewis gun must be with the forward platoons. But is Major Lecky correct in saying that counter-attack in the hills is impossible? I understand that counter-attack by fire, often combined with assault, was a feature of the enemy action during recent transborder operations.

13. If our argument is sound, we must conclude then that, alike in normal and in transborder hill warfare, Lewis guns are required in attack with the leading platoons under the platoon commander's control and therefore under their command; since in the zone of the leading platoons no one else can or should control the guns. In hill warfare there may be occasions when the Lewis gun can usefully be employed to fire from the zone of the company reserves under the hand of the company commander, but not in normal warfare where the Lewis gun sections will more often lead the advance.

Attack is pre-eminently the most important operation of war. We must organize above all for attack.

And though we may train for the abnormal, we must organize for the normal. Major Lecky, in basing his proposals on the abnormal, ignores this elementary principle.

14. Let us look at it, however, from the point of view of the defence. In normal warfare, how do we organize the infantry the defence? On a platoon basis; platoon posts or areas looking front with Lewis gun fire. Where are the Lewis guns? In the platoon commander's zone and therefore under his command. Counter-attack platoons require their own Lewis Gun as in any other attack.

In the hills, is the position different? No; except in this, that, within the camp, counter-attack platoons have no use for their guns.

What about piquets? Major Lecky tells us that young officers, fresh from Lewis gun courses, wish to put Lewis guns in piquets, but cannot give their reasons. "If true, it's a pity".

## ***"Tactical Use of Lewis Guns"***

But, if true, the fact that Lewis guns in piquets are most useful is in no way affected.

They help the piquet to reach its position. Once there they are easily concealed. They make the most of the smallest cover. By day, at moments of emergency, they double the fire power of the piquet. They open a sudden and peculiarly terrifying fire at fleeting targets. They are admirably suited for supporting adjacent piquets. Major Lecky admits all this, but seems still to dislike the idea of Lewis Guns even in the day piquets. And for two reasons, First, the difficulty of their withdrawal owing to their immobility. I have already suggested that this difficulty is greatly exaggerated. And second, he foresees a danger that officers detailing the piquets may treat the Lewis gun as equal to twenty-five rifles in all circumstances. This seems rather far-fetched. The advanced guard commander or other officer detailing the piquet would normally, if the piquet is small, that is less than a platoon, say whether or not it should include a Lewis gun section. And we can surely credit such officers with possessing some slight knowledge of their profession.

As for night piquets, it is true that the fire value of the Lewis gun by night may, in the piquet, be little greater than that of rifle. But it does no harm there and the section, at a pinch, can do their bit with rifle, pistol, bayonet and bomb like any other section.

Let us then use the Lewis guns freely in piquets by day; and if we are quite certain that at night they are useless, and that it is worth the trouble involved, bring them down to the perimeter by night.

16. Coming now to retirements we find a certain difference between normal and transborder warfare. In the former we endeavour to prevent the enemy getting at our mainbody by holding him off with a screen of firing troops which can be sacrificed in emergency. We desire in fact to develop the maximum of firepower from our rearmost elements using the minimum of manpower.

In transborder warfare the intention is, in general, the same; but we are also greatly concerned in preventing the enemy from interfering with the rearmost elements themselves. We therefore require great mobility in the rearmost lines and great firepower in the covering fire troops. This might justify the Lewis gun sections of the rearmost line being sent back to thicken up the covering fire when this is weak, and such sections might then be temporarily controlled by the Company Commander.

17. Other instances may occur in transborder warfare where Lewis gun sections may become temporarily detached from their platoons for employment under the Company Commander. Expediency must be our guide. But such separations should be as temporary as possible, and we may safely say that, in normal warfare at all times, and in transborder hill warfare nineteen times out of twenty, the Lewis gun must be treated as a platoon weapon. We should therefore be transgressing the elements of organization if we did not include the Lewis gun in the platoon in peace as in war. As Major Lecky justly says, "the question of command solves itself naturally, being determined by the normal position of the gun in the fire fight."

18. But, says Major Lecky, "for the full development of its firepower, the Lewis gun section requires a specialist training", and the platoon commander, "who certainly has no special ideas on its training and tactical handling", is not the man to train it. The platoon commander is however the individual responsible for the tactical handling of the section in war. The sooner, therefore, that he acquires some ideas regarding it the better. He will do so best by being held responsible for its technical and tactical training in peace. This is indeed the only possible way on which he can learn his work.

There is, as a matter of fact, nothing very mysterious about the Lewis gun; and we shall do well, to make a stand against this talk of specialist training.

It is human nature to try and invest one's own job with the glamour of mystery. But we must look on the Lewis gun as

what it is: the normal weapon of the Infantry soldier, just as normal as the rifle, the bayonet, and the bomb. No infantry man is fully trained unless he is an expert in all these weapons. Every Platoon commander must be so, or he is unfit for his position. It can be done. All that is needed is hard work—good teaching, and plenty of both.

19. Major Lecky is anxious that the Lewis gun section shall be trained collectively under the battalion Lewis gun Officer. "Trained for collective action, Lewis guns are adaptable and always ready for independent action. The converse is not the case". This is a truly astonishing statement. The converse of course is the case. And why? Because infinitely the most difficult job that a Lewis gun section commander has to face is his normal job. Working in combination with the rifle sections, thrown almost wholly on his own as regards the technical and tactical handling of his gun and section, he requires technical and tactical knowledge and ability of no mean order. Compared with this, to work collectively under orders would be for him a mental and physical holiday. "The whole", in fact, "is greater than the part," as Euclid somewhere observes. The habit of inter-action between the Lewis gun section and rifle sections of the platoon is the most difficult and most essential part of the section commander's training. He can only learn this in his platoon.

20. One more point and I have done. Major Lecky anticipates the evolution of the Lewis gun on the same lines as that of the Artillery arm and of the machine gun, both of which, originally battalion weapons, have passed into the hands of the higher formations. I do not so read the future of this weapon. The gun and machine gun became separated from the battalion because they were essentially different from the infantry, because their normal role in battle was found to place them outside the battalion commander's zone. The machine gun has now returned to the battalion for a very good reason; but, as Major Lecky is perhaps aware, not wholly for tactical reasons. The evolution of the Lewis gun must be in an entirely opposite direction. It is essentially the same as the infantry. Its introduction was an

attempt, not too successful perhaps, to provide the infantryman with an automatic rifle. It is in this direction that it must evolve until we arrive at the ideal infantry weapon, an automatic rifle light, handy and with the minimum of recoil, capable of firing single shots or intense bursts, of projecting rifle grenades and of use with the bayonet. The tendency of the automatic rifle, is to move forward in the fight, rather than rearward.

21. But when all is said, we come back to facts. And the facts that Major Lecky and those who agree with him must face are, that the Lewis gun is an integral part of the platoon, that it will remain so and that the platoon commander is wholly responsible for the training of the section.

The battalion machine gun platoon will now give Major Lecky the battalion reserve of firepower which he desires. Let us hope that, with its advent, we shall no longer see that misuse of the Lewis gun which is so common and which his proposals would perpetuate indefinitely.

22. May I add, in order to defend myself from a charge of plagiarism, that the foregoing was written before I became aware of the teaching at the Mountain Warfare School on this subject. What is taught there has required no changes with the exception of the addition of two sentences of no essential importance. Apart from the great lack of training in platoon and section commanders which, at the present time, undoubtedly creates difficulties necessitating on occasions abnormal methods, the trouble in this matter of Lewis guns seems to be this. That a very large number of officers have not yet realized the fundamental principle that the company consists of four platoons and the platoon of four sections; that in the handling of the Company every platoon, and in the handling of a platoon every section, must be given a definite task, a definite objective. They have not, in fact, understood what is meant by manoeuvre. We want to see control, clear orders based on a clear appreciation of the needs of the moment, allotting definite and appropriate functions to each sub-unit. This is the great lesson of the war in minor tactics. It is a lesson which has still to be learnt by many.

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g the message, flashed his electric torch for an instant on the face of the solitary horseman, muttered to himself, "Ah ! Baz ! News from the right patrol, anyway, thank goodness !" and fell to perusing the message. He continued to move forward, the rain dripping from the edges of his helmet and from the point of his somewhat formidable nose.

"Here Charles", said he, calling up 2nd Lieutenant Charles Murray, his only remaining squadron officer, after reading the message, "here's a message from old Dost Mahomed. Says he - no enemy till he got to Saini, when a small hostile party popped out of the village along the road towards the river. He followed them up, found the bridge held by enemy, length unknown, and is looking about for some ford to get across the river, get round them and have a look into Tret village; says he was heavily fired on from the bridge, but no casualties".

"Wish to goodness", Coldwell went on, speaking to himself rather than to his junior officer; "wish to goodness I could hear something from the left patrol. I only wanted Williams to get up Nundy Droog and have a good look all round from the top; he must have got there ages ago. Pass the word, please, that we'll halt at the cross road in Sheikh Khan village and give a half feed. Must wait there a bit for news from Williams, though I don't suppose he has seen anything very much and still less met anybody — except, of course — well, but the ford doesn't look promising all the same. Who, but an idiot would come that way when there is that good bridge at Tret ? Still, I've got to look after my left flank, which is also the left flank of this bally circus. So pass the word, Charles".

Charles passed the word.

Major Coldwell was the Commander of D Squadron, 43rd Cavalry. His squadron was the left one of a long line of protective cavalry covering the front of a large force far in rear. This force was advancing to encounter an enemy of middle-eastern extraction, backed, organised and equipped by an Eastern-European

## A CASE FOR CONSIDERATION.

BY PADDY BUTTON.

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It was 6. 0 p. m. of a winter evening. The dull, lowering clouds made it abnormally dark. The rain poured down steadily and pitilessly, rendering the black cotton of the surrounding country beyond the roads almost impassable for man and quite impassable for beast except water buffaloes.

The inhabitants of Sheikh Khan village were obtaining what shelter they could under the crazy leaking roofs of their houses, and so were not aware of a solitary Indian horseman, who, drenched to the skin and with the end of his lungi pulled round the lower part of his face, trotted slowly and dejectedly through the village in a southerly direction throwing up sheets of muddy water from the feet of his tired horse.

As the solitary rider was just about to pass out of the village he almost collided with other mounted figures, similarly dressed and similarly drenched and bedraggled, but riding in the opposite direction. A startled challenge, a brief colloquy - and the riders separated to pursue their respective ways.

The solitary horseman had, in fact, encountered the outriders of the advanced guard of D. squadron, 43rd Indian Cavalry. He urged on his jaded horse to a brisker trot and he himself assumed a more cheerful air and flung the end of his lungi over his right shoulder so that it clung limply, but tenaciously, to the nape of his neck. In a hundred yards or so he could just make out dark figures moving on each side of the road as they approached him. Fumbling in his sodden breast pocket he withdrew from it an even more sodden scrap of paper. Holding this in his hand he drew himself up with the satisfied air of one whose task is accomplished.

"Major Coldwell, Sahib Bahadur!" he called.

This appeal elicited nothing more than a grunt from the leading figure, which proved to be that of Major Coldwell, who,

taking the message, flashed his electric torch for an instant on the face of the solitary horseman, muttered to himself, "Ah ! "Gul Baz ! News from the right patrol, anyway, thank goodness !" and fell to perusing the message. He continued to move at a walk, the rain dripping from the edges of his helmet and from the point of his somewhat formidable nose.

"Here Charles", said he, calling up 2nd Lieutenant Charles Mercury, his only remaining squadron officer, after reading the message, "here's a message from old Dost Mahomed. Says he saw no enemy till he got to Saini, when a small hostile party galloped out of the village along the road towards the river says he followed them up, found the bridge held by enemy, strength unknown, and is looking about for some ford to get accross the river, get round them and have a look into Tret village; says he was heavily fired on from the bridge, but no casualties".

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### ***A Case for Consideration.***

Power and conspicuous for its mid-European savagery. When his squadron moved out from bivouac that morning, Major Coldwell had received orders to search for the enemy and to report his dispositions in a certain area which terminated at the Kalat River, to clear that area as far as possible of any hostile detachments which he might encounter and to seize, hold and secure for the advancing army important crossings over that river.

As he left camp some 30 miles to the southward, Major Coldwell had despatched a small patrol under Captain Williams to reconnoitre one portion of his allotted area and especially to get a general survey of the country from Nundy Droog, the highest, indeed the only hill in the neighbourhood from which it was opined, that the presence of any considerable bodies of the enemy on this side of the Kalat River, and beyond it too, could be detected. This was the left patrol. The right patrol consisted of one troop under Rissalder Dost Mahomed, Punjabi Mussulman. Its orders were to search the remaining portion of Coldwell's zone and, finally, to seize the bridge over the Kalat River near Tret. In Major Coldwell's opinion, this bridge constituted the only important river crossing in the area for which he was responsible.

The message that the solitary Indian horseman had brought in the pouring rain was the first news of the presence of the enemy that Major Coldwell had received that day. Rissalder Dost Mahomed had hitherto consistently reported "no enemy". The only message from Captain Williams, received some 15 miles from camp had been to the same effect. His silence, though possible justifiable, was nevertheless characteristic of his phlegmatic temperament. Therefore, although impatient at the nonreceipt of news, Coldwell saw no cause for anxiety on Williams' account. Nevertheless, he reckoned that he ought to have received news from Nundy Droog long e'er this and he chewed the cud of reflection as he led his squadron into Sheikh Khan, and gave orders for the posting of piquets at the exits from the village.

After dismounting, and as the men were adjusting their nose-bags, one of the out-riders of the advanced guard, leading a riderless horse, rode up to Major Coldwell.

"Sahib", he said, "we found this horse sheltering under a tree just out side the village".

Coldwell passed the light of his torch rapidly over the horse. It was a dark bay and had on its left haunch a peculiar gray mark, resembling nothing so much as a splash of whitewash administered by a liberal hand — an unmistakable.

"Whey!" said Coldwell, "that's Duffadar Moti Ram's horse! Here, Raji Ram", he said, calling up the Rissaldar of the Jat troop, "wasn't Moti Ram in Williams Sahib's patrol this morning?"

"Yes", said Rissaldar Raji Ram as he came hurrying up.

"Well", said Coldwell, "here's his mare".

Raji Ram made an exclamation, as he and Coldwell and Charles Mercury began a careful examination of the mare and her accoutrements. She was tucked up with the cold, but not unduly splashed with mud except in the lower extremities of the legs and on the belly. The accoutrements appeared to be all correct with two exceptions — the nose bag was not on the saddle and the rifle bucket was empty.

"Was she properly bitted when you caught her", asked Coldwell of the man from the advanced guard who had brought her in.

No Sahib", he answered, and "The bit was swinging loose and the reins were trailing — see", said he, holding them up, "the reins are broken".

"Ah", muttered Coldwell, rubbing his nose — a habit of his when he was cogitating. "Charles, try her girths".

Charles Mercury was getting quite excited. He tried the girths vigorously — to the evident annoyance of the mare.

"Major", he exclaimed, "they're quite loose; and the saddle has shifted a bit".

***A Case for Consideration.***

"Quite so", said Coldwell. "Some damned carelessness somewhere, I suppose. Rissaldar Sahib, take her away. Well, anyway we can't accuse Williams of not sending us negative information, which, I am told, is better than none at all. I suppose there were no signs of Dufadar Moti Ram on the road were there?", he asked, turning to the man from the advanced guard.

"None at all", said the man from the advanced guard. "The Jamadar Sahib", (the advanced guard commander), "has sent two men down the road to look for him".

"Right", said Coldwell. "Now you can go back and give my salaams to the Jamadar Sahib and tell him to send me news as soon as he gets any".

"Very good Sahib", said the man and splashed away into the darkness.

The rain still poured down pitilessly. Horses and men stood shivering close against the walls of the houses taking such poor cover as was afforded by their, scanty, ungenerous eaves. The peaceful crunching of gram was audible, to the accompaniment of the persistent monotonous drumming of the falling rain.

Suddenly Rissaldar Raji Ram came up to Coldwell and whispered, "There's someone coming down the road".

There was. It proved to be one man on foot leading a horse on which sat a huddled figure. By the light of his torch Coldwell perceived that the pedestrian was Mansa Ram. He was a sowar from the piquet posted at the Nundy Droog road exit from the village. The horse which he led showed signs of distress. He was covered with mud on the near side of the head and neck and on the left haunch. He conspicuously 'favoured' his near fore. Clearly he had been down.

The huddled figure on the horse, half supported in his place by Sowar Mansa Ram, gave no sign. When the torch was flashed in his face he blinked his eyes, but the light revealed the features of Sowar Jai Ram, no longer his smart, dapper self. His lungi was gone and the left shoulder of his kurta was dark with mud.

"Phew", whistled Coldwell to himself softly, "definite news from Williams' patrol at last!"

Willing hands lifted Jai Ram from his horse and propped him up against the nearest wall in a sitting position. His horse was led away — hobbling, on three legs. Charles Mercury was keenly interested.

"Now, Bhai", said Rissaidar Raji Ram, to the recumbent man, kneeling beside him and holding his shoulder solicitously, "buck up and give your report".

Jai Ram only blinked.

Coldwell looked down at him, stroking his nose reflectively. "Here Rissaidar Sahib", said he, producing his flask, "give him some of this. Must wake him up some how".

The Rissaidar gave him a good gulp of brandy. The only effect of this was, that, from blinking, Jai Ram fell to staring fixedly, apparently at the upper edge of Major Coldwell's field boots. This, however, was an improvement.

"Murjata", groaned Jai Ram.

"Rot", exclaimed 2nd Lieutenant Charles Mercury, now really excited. "Murjata! He's only taken a toss and is a bit knocked out of time. That's all. Murjata!"

"Now Jai Ram, Bhai" said Rissaidar Raji Ram, insinuatingly, "Come on, buck up; what's the news?"

"Murjata.", repeated Jai Ram and resumed his contemplation of the squadron commander's boots. Raji Ram gave him another tot of brandy.

"Oh, Lord!" groaned Charles Mercury, "this is awful".

"Jai Ram", said Major Coldwell sharply. "Listen. Where's your message?"

"Message? Of course", muttered Jai Ram, "undoubtedly", and his right hand crept towards his breast pocket.

It did not take long for Rissaidar Raji Ram to search all his pockets and the contents of his haversack as well. But there was no message. Raji Ram looked up blankly at Coldwell.

"Well", said Coldwell, "that's disappointing."

"I call it — y", cried Charles Mercury.

"Yes, that's certainly one way of describing it", the squadron commander agreed, stroking his nose reflectively.

"Look here, Rissaidar Sahib", he said, "ask him when he last saw Williams Sahib."

"Very good", said Raji Ram. Then turning to Jai Ram and shaking him again by the shoulder — "Brother, Brother" said he, "Vilyam 'Sahib, Captain Vilyam Sahib Bahadur, YOU know —"

"Vilyam Sahib? Of course —".

"Yes, Vilyam Sahib — rather a stout sahib, YOU know, — with red hair. When did you see Vilyam Sahib?"

"Vilyam Sahib? Of course. Naturally. A hill — a high hill at the top — of a very high hill — Of course". Then he added, as an after thought, "yes, undoubtedly — watering horses — without doubt".

"Oh, hell", frantically exclaimed Charles Mercury, now thoroughly exasperated. "Watering horses at the top of a hill. Fool! Fool!"

"Charles", said Major Coldwell. "If you don't behave, I'll have to send you away. This is a case for tact".

Charles was silent.

"Evidently got to Nundy Croog at any rate". Coldwell reflected. "Give him some more brandy, Raji Ram, and ask him what happened then".

To this question Jai Ram was understood to mutter something about 'field glasses'. And then, as the last dose of brandy took effect, he continued, "The Sahib said — very good — gave a message — we were coming — down — from — the hill —" and his voice trailed away to nothing as his eyes once more assumed their fixed stare.

His suppressed excitement was too much for Charles Mercury and he walked away breathing heavily through his teeth.

"Very good, Bhai", said Raji Ram, "you were coming down the hill with Vilyam Sahib —"

"Certainly, with Vilyam sahib".



"With Vilyam Sahib. Good — and then?"

"Then? Then? there were shots — many — many shots — everyone — killed — masheen guns".

"Surely not EVERYONE killed, Bhai", "said Raji Ram. For instance, YOU were't killed".

"As for me, I am dying", groaned Jai Ram. "Murjata".

"No you're not, Jai Ram", said Coldwell sharply. "You're not dying at all. Now buck up. Who was killed? Was the Sahib killed?"

"The Sahib was killed — fell down — also Lekh Ram — Digh Ram — Shib Ram — Ganga Ram —"

Ganga Ram was Jai Ram's brother.

"What are you saying, Bhai?" said Raji Ram, now fairly irritated and shaking him by the shoulder, "Ganga Ram wasn't killed. He was the man, Sahib", turning to Coldwell, "who brought that message from Vilyam Sahib this morning".

"Yes I know", said Coldwell, "give him some more brandy".

"Now listen, Jai Ram", said Rissaidar Raji Ram, after administering another dose, and trying to control his temper, "Ganga Ram wasn't killed, because he's here".

Ganga Ram who was looking over the Rissaidar's shoulder acquiesced loudly.

"Yes, Ganga Ram was killed," Jai Ram continued dreamily, "all the horses were killed —"

"I know of two which weren't" said Coldwell.

Jai Ram eyed him almost suspiciously.

"All the horses were — killed — or galloped — away".

"Ah," said Coldwell, "this is getting interesting. I know of one horse, anyhow, which galloped away".

"So do I", said Charles Mercury, who had come back.

"Rissaidar Sahib", said Coldwell, "ask him what happened when he caught his horse".

Rissaidar Raji Ram did so.

"My horse?" said Jai Ram "my horse? Of course I caught my horse — why not? The Sahib gave — another — message."

***A Case for Consideration.***

"Oh my God —", Charles Mercury began, but broke off abruptly on meeting a glance from Coldwell. "Sorry, Major, but he's just said that poor Williams was killed".

The faint flash of intelligence died down in Jai Ram's eyes. The brandy which at first stimulated was now fogging his brain. He seemed to doze off.

"Well", said Coldwell, as he looked down at the sleepy Jai Ram, "evidently that's THAT. Nothing more to be got out of our friend, Jai Ram for the present. Question is —" and he relapsed into thought.

The apologetic Charles Mercury was now recovering. His impatient spirit was re-asserting itself. He shifted uneasily from one foot to the other, as he did so, his boots squeaked. He eyed his silent squadron commander furtively and even went so far as to imitate his thoughtful attitude. But it was no good. He must have his say.

"Excuse me, Major", he said, in a chastened tone of voice which, however could not disguise his suppressed excitement. "When do we start for Nundy Droog? They've finished their feeds ages ago. May I pass the word to get ready to move off?"

"Yes, Charles", said Major Coldwell. "You may pass the word that we'll move off in 10 minutes, but the squadron is not going to Nundy Droog".

Charles' jaw dropped with astonishment, and his expression was really comical even in those circumstances.

"But, Major", he stuttered, "surely we're —"

"Oh dear me no", said Coldwell, "we aren't. The squadron is going off to Tret — or at any rate as near there as we can get".

"Well I'm —".

"Charles", said Coldwell good-naturedly. "You're a good little chap, but there is one thing you sometimes forget. Little boys 'should be seen and not heard'. Pass the word as I told you".

Charles went off obediently.

Major Coldwell produced his message book and wrote slowly. He tore off more than one sheet, folded each, and, as he slipped them into their envelopes, he muttered to himself —

"Out of the mouths of babes and sucklings —".

\* \* \* \* \*

Well, I suppose that squadron commanders, even of the 43rd Cavalry are not above criticism and the question for consideration is whether Major Coldwell was correct in the decision at which he had arrived.

Also, to whom did he address those messages and what did he write in them?

— — —

# **THE MUTINY DAY BY DAY.**

BEING

EXTRACTS FROM THE LETTERS OF  
GENERAL SIR ARCHDALE WILSON, BART., G. C. B.  
TO HIS WIFE.

PART IV

EDITED BY COLONEL H. R. NEVILL, O.B.E.

*August: the Turning of the Tide.*

LXXXV.

*Camp before Delhi,  
4th August 1857, 12 noon.*

Yesterday we received a direct communication from Brig'r Gen'l Havelock dated left bank of the river Cawnpore, 25th Ult'o. With 1500 Europeans some Seikhs and 9 Guns, he had fought 3 battles with the Cawnpore Insurgents, licking them well each time, taking all their guns. The first battle was at Futtehpoore on the 12th, 2nd on the 16th at Aug and 3rd at Cawnpore. He regrets he cannot come at once to Delhi, but his orders are positive to relieve Lucknow to which place he was marching when he wrote. We also got a letter from Agra mentioning that Sir H. Lawrence had been wounded on the 2nd. and died on the 4th. but I do not believe it, and the Seikh who brought his despatch denies it in toto. We hear from the city that the rebels lost very heavily in their attack upon us on the 1st, and are much disheartened, many are escaping out of the city.

**NOTE.** Despite the general refusal in camp to believe the sad news from Lucknow, it was only too true. Sir Henry Lawrence was wounded by a shell in the Residency on the 2nd July and died two days later. The reason why the report, brought by a Sikh of the Guides, was disbelieved was that the letter from Havelock, addressed in ignorance to General Reed, made no mention of Sir Henry Lawrence. As a matter of fact, however, in writing to Mr. William Muir at Agra, Havelock expressly referred to the death of the Chief Commissioner.

While Wilson learned by this letter that the force from Allahabad had been diverted to Lucknow, he was grossly misled as to his expectations of

assistance from that direction. On the 26th July Lieutenant Colonel Tytler, Quartermaster-General with Havelock's force, wrote from Cawnpore to Captain Earle, Assistant Quartermaster-General at Meerut, to say that Havelock would relieve Lucknow in four days and would probably march to Delhi with four or five thousand Europeans and a large force of artillery. Havelock himself stated that "immense reinforcements" were coming up from China and England, thus raising hopes which were never fulfilled so far as the siege of Delhi was affected.

The force before Delhi was singularly ill-informed as to the progress of events in Oudh, and Hervey Greathed himself expected that Havelock would soon dispose of that province.

Subsequent events showed that the rebels, though quieted for the moment by their failure on the 2nd, had but little in strength or confidence, and that the expectation of wholesale desertions was far too optimistic.

**LXXXVI.**

*Camp near Delhi,*

*5th August 1857, 12 noon.*

I received your letters of the 31st and 1st, this morning, and in reply to your questions, I am happy to say that Chamberlain is going on very well. His arm is, I believe quite safe. My personal Staff are numerous. Barchard is my Senior A.D.C., the rest I took over. Turnbull 2nd A.D.C., Low 78th Highlanders, young Low 9th Lancers, and Greathed Engineers extra A.D.Cs. The latter does not act as Colonel Smith objected to his performing that duty in addition to his own as Engineer. Nicholson is at Umballa today. I do not expect him here before the 14th or 15th. You are getting as unreasonable as the other know-nothings who acting on their own impatience think a Force under 2000 Bayonets (Europeans) can easily hop over the walls of Delhi covered with heavy guns, and massacre with ease the 30,000 or 40,000 men defending it, as easy as toasting cheese. We here all think this force has done wonders in keeping these fellows at bay so long—I shall be more than satisfied if I can hold my position until Nicholson joins. I have been so interrupted since commencing this, that I fear I have not been very intelligible. Hamilton goes away sick in a few days.

**NOTE.**—Captain C.H. Barchard belonged to the 20th N.I. and Lieutenant J. R. Turnbull to H. M. 75th Foot. With the others Wilson has as usual

*The Mutiny Day by Day.*

gone wild in the matter of names and designations. Lieutenant R. H. Drury Lowe belonged to the 74th Regiment, and Lieutenant R. C. Low to the 9th Light Cavalry.

The reproof contained in this letter was not deserved, and Wilson repented of it not long afterwards [see letter XCVI], but the incessant exhortations of the civil authorities, urging that Delhi should be taken, caused a general irritation to the force and its commander. Little credit was given to the small army before Delhi for the performance of its role as a containing force, and Wilson to the end of his life suffered from the undeserved criticisms of those who regarded the precarious position on the ridge as a proof of inactivity. In some quarters it has been represented that Wilson was naturally too cautious and inert to do anything on his own initiative, and that he was with difficulty spurred to action by Nicholson, Baird Smith and Alexander Taylor. It is too often the case that the man who has laid the solid foundation is obscured by the glamour attaching to those who figured brilliantly in the completion of the task.

An attempt was made this day to destroy the bridge of boats by means of fire-boats filled with explosives, but it proved a complete failure, to the discomfiture of the Engineers. One boat exploded on a sand-bank, while the other was captured by the rebels, who pluckily swam out and extinguished the slow match.

## LXXXVII

*Camp before Delhi,*

*6th August 1857. 11 a.m.*

I have very little to tell you today, except the Pandies are out again, but their attack seems a very feeble one. I am quite well again, I am happy to say. My bearer is I believe, pretty well supplied with buttons and thread, at least I have found no want of them yet. What I do want however is some waist-coats. I have only the two brown holland ones and they have become very stubby. I think I told you, I cannot expect Nicholson before 14th or 15th. I shall be very glad when he arrives.

**NOTE.**— The attack never developed, though a body of some 300 enemy cavalry galloped up the road towards the Flagstaff Tower, making a brave show but wheeling about as soon a battery was brought to bear on them. Artillery fire was, however, kept up all day, especially from Kishanganj, a new position which was retained by the enemy till the end of the siege.

Some casualties were caused by musketry fire directed intermittently at the picquets on the right flank, but the supports and reserves were recalled to camp by 11 a.m. In the afternoon pony-races and a cricket match were held in the lines; but subsequently the force turned out in consequence of a rumoured night attack. Nothing eventuated beyond a fusillade at 2 p.m. on the Metcalfe House picquet, and this was quieted by a single volley.

During the day Lieut. J. E. Brown, 33rd N. I., attached to the Kumaon Battalion was mortally wounded in one of the batteries, and two other officers, Captain T. R. Kennion of the Artillery and Lieut. A. B. Temple, 49th N. I., also attached to the Kumaon Battalion, were hit, the former severely. Any casualty in the artillery was serious, as the number of officers was becoming gravely depleted, a fact which caused Wilson much anxiety, as he was only too well aware of his weakness in this all-important arm.

### LXXXVIII

*Camp before Delhi,*

*7th August, 1 p.m.*

I have received your dear letter of the 3rd. Thanks, dearest, for all the expressions of good wishes you have sent me. Poor old Fop! I fear his end is fast approaching. Poor old fellow! I shall grieve for him.

The Pandies have continued their attack ever since yesterday morning, and last night they erected a heavy Battery in the Pahareepore village, which is annoying us much. We have pretty well knocked their Battery about their ears, but the rascals are evidently intent upon wearying us out, they relieve one another. One party goes in and another comes out. It is hard work upon my poor fellows, and very anxious work for me. Nicholson came in by mail this morning, but his force will only be at Kurnaul tomorrow evening.

NOTE. — The annoyance caused by this battery was considerable, but the fire of the enemy was generally kept under control by the heavy pieces on the Ridge. The intrusion, however, disturbed the peace of the camp and with the innovation caused by the practice, which started next day, of bringing out light guns with skirmishers in front, the artillery fire on both sides became almost incessant. The loss caused was small, but the men were harassed day and night, while the problem of relieving the picquets became more difficult than before. Wilson, himself a gunner, viewed this new development more seriously than others. He had long felt the scarcity of artillerymen in spite of such improvisations as he had

*The Mutiny Day by Day.*

been able to devise by utilising men of the 9th Lancers and other units; but now he was alarmed by the shortage of artillery officers. Colonel Garbett, who received a slight wound, had soon after this date to leave camp and died of blood poisoning. Major Murray Macenzie, wounded on the 30th July, was sent to Simla, where he died. Major Tomb was sick. Captain Turner was severely wounded, Lieut. Light was incapacitated by sickness in July and never returned. Captain Kennion had been hit the previous day, and several others, owing to wounds or sickness, were no longer available for duty.

Nicholson arrived by the mail-cart early in the morning, and soon was out with the General. In the afternoon he inspected all the works on the right, in company with Captain Norman, and the following morning he went round the posts on the left. His force reached Karnal during the day. He had travelled fast. On the 3rd of August Nicholson received from Wilson a letter saying, "the enemy have reestablished the bridge over the Nugufgurh canal (which we had destroyed) and have established themselves in force there, with the intention of moving on Alipore and our communications to the rear. I therefore earnestly beg you to push forward with the utmost expedition in your power, both to drive those fellows from my rear, and to aid me in holding my position."

While the arrival of Nicholson was welcomed as a great accession of strength, his manner was not altogether acceptable to those with whom he came into contact. Reid, though afterwards his firm friend complained of the criticisms made openly by Nicholson when inspecting the position at Hindu Rao's House and that evening at the headquarters mess, a gathering which was looked forward to by all, the cheery good humour was distinctly damped by the silent solemnity of this big man with his great black beard and forbidding voice.

## LXXXIX

*Camp before Delhi,  
8th August, 1857,  
1. p. m.*

Last night I received your letter of the 4th and the two pair of galoshes. I shall give one pair to John, they are both rather too short in the soles, they will however stretch out in time.

I had not heard of my appointment to take the command of the Meerut Division, and considering it not was possible for me to take up the command, as I was then before Delhi, I don't thank the Governor General for the honour.



I unfortunately got a return of the looseness which has made me very shaky today, but I hope I have stopped it in time. The worst is these attacks leave one so weak and helpless, and the Doctors do all they can to keep you so by allowing you nothing to be eaten but abomination arrowroot.

The Insurgents are still bent on mischief but have not been so worrying today. I wish we could have some of your rain, both for our own sakes and to drive these fellows into Delhi again. It is becoming very hot from want of rain, we have hardly had any since the 2nd. There was a fine explosion yesterday afternoon in the city. Their Manufacture of Gun-Powder blew up. 500 men including all their manufacturers and their stock of sulphur and saltpetre are said to have been blown up, and that they will find great difficulty in supplying themselves now. I hope I shall be able to give a better account of myself tomorrow.

Note.—The appointment to which Wilson refers was now a matter of ancient history, the command at Meerut having gone to General Penny.

Again Wilson was attacked by dysentery at an anxious time, but fortunately he took medical advice without delay and so staved off the danger, to the great relief of the staff, who were already perturbed in mind as to the consequences of the sudden promotion of Nicholson to the rank of Brigadier General.

The explosion of the powder magazine, which the rebels had placed in a distant part of the city, was witnessed by those on the Ridge, and was regarded as the first stroke of good fortune they had experienced. The mutineers attributed the occurrence to treachery on the part of Hakim Ahsan-ullah, Prime Minister to Bahadur Shah, and in consequence they looted his house.

### XC

*Camp before Delhi,*

*9th August 1857, 1 p. m.*

I wish I could send you a better report of myself today, but I am more weak and shaky even than yesterday—all owing to the Doctor who will not allow me anything but slops to eat—with the work and anxiety I have I cannot get on with such food as they allow me.

The rascally Mutineers are still out, and keep up their attack upon us, worrying us very much. The rascals have at last found out the way to distress us, they have established a heavy Battery in the village of Pahareepore and have 6 or 8 light Guns always

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out besides. The position of the latter we can only see by the smoke of their Guns, they are so well hid by Jungle. Our artillery men are worked night and day, and are getting knocked up. Unfortunately my force is too weak to go out and attack them. How I long for my reinforcements. They ought to be here now in three or four days, but these rascals are so systematic and persevering in their attacks now that I do not hesitate to tell you, Dearest, we are getting in a precarious situation, but I hope we shall manage to hold out until our reinforcements come up. The Lord of Hosts will not, I trust forsake us, but will continue to us His gracious aid and protection. In Him do I put my trust, He will not let me be confounded.

NOTE.—Again physical unfitness produced mental depression. The threat arising from the formation by the enemy of an advanced artillery position was undoubtedly serious, but with a return of health Wilson viewed the menace with far less concern. His statement as to the weakness of his force was due to the fact that with his extended defences he had a longer time to hold against a foe who was vastly superior in numbers, and also to the rapidly increasing rate of sickness in the camp, a development which in a short time reduced battalions to mere skeletons. It was now the most trying time of the year, and the seasonal influence was all the greater on account of the exposure to which the troops had been subjected throughout the hot weather. The Mutiny summer was unusually mild, but even the mildest hot weather in the plains under canvas constituted a very severe trial for European troops and was bound to have a deteriorating effect.

XCI.

*Camb Near Delhi,**10th August 1857, 2 p. m.*

Only a few lines to-day to tell you I am much better.

\* \* \* \* \*

The Insurgents still continue their old game of worrying us bringing out their guns, which they move about under cover of the numerous trees but very seldom made any attempt to close, when they do they catch it. We luckily lose very few men, from their present mode of fighting, but it is very worrying. We have no more news from Havelock. I am getting anxious to hear what he has done at Lucknow.

NOTE Under cover of heavy fire directed from the city walls on Metcalfe House, the Mutineers constructed a battery for light guns at Ludlow Castle, and these weapons were moved from place to place under cover, with the object of injuring the advanced posts. On the 9th the picquet at Metcalfe House had been severely

bombarded, but the loss was only one killed and one wounded. The fusillade however, continued and during the 10th two officers were wounded slightly, Lieut. G. Baillie of the Artillery and Brevet Captain E. N. Sandilands of the Kings."

XCII.

*Camp before Delhi,  
11th August 1857, 1 p. m.*

I am rich in your dear letters today. Last night I got those of 7th & 8th. and this morning one of the 6th. So you see I am treated by these dawk gentry just as badly as you are.

We have not yet had any further communication from the Force coming up from below, and we have had no rain, though constantly threatening. Yesterday was an intensely hot day. The Pandies are still out with their light guns, playing their usual game of worry; they do not do us much harm. I am glad you are busying yourself at Mussourie in making up comforts for our men; the rugs will be particularly useful. When do you think you will be able to despatch them? and now if they get safe to Kurnaul they can be easily sent on from thence.

NOTE. The annoyance caused to the outposts was so persistent that action had to be taken.--Nicholson was anxious to take part in the enterprise himself, but Wilson determined to entrust the task to Showers. A force was organised with all secrecy, so well secured that the camp had no knowledge of what was happening till it was over. The troops detailed were six Horse Artillery guns under Captain Remington, one squadron 9th Lancers under Captain the Hon'ble. A. H. A. Anson, the Guides Cavalry under Captain Sandford, 100 men of the 75th Foot from the Metcalfe House picquet under Captain R. Freer of the 27th Foot, 1st Bengal Fusiliers 350 strong, under Major G. O. Jacob, Coke's Corps, 250 strong, 100 men from the King's under Captain A. Robertson, 100 men of the 2nd Fusiliers under Captain J. T. Harris, 100 of the Kumaon Battalion under Lieutenant Thompson, and a like number of the 4th Sikh Infantry under Captain Chambers.

The force was still waiting anxiously for news from Havelock. A report brought by a runner that he had reached Sarai Miran in the Farrukhabad district, caused much elation in the Camp, but wiser heads knew that they could depend on nothing but a direct announcement from Havelock himself. It is doubtful whether at this stage even Nicholson contemplated the capture of Delhi with the force immediately available.

***The Mutiny Day by Day.***

## XCIII.

*Camp Delhi, 12th August 57.*

I have a little news to send you today. My Picquets at Metcalfe House have for the last 2 or 3 days been much annoyed by a party of the Mutineers supported by several Guns, who had come out from the Cashmere Gate and established themselves in front of the Picquet: I resolved without waiting for our reinforcements to attempt to surprise them this morning, and capture some of their Guns. The surprise was complete, the column of attack under the able leading of Brig'r Showers came upon them a little before Daybreak unperceived, killed a lot of them and captured 4 light Guns (2-9 prs 1-6 pr 1-2 pr) which were borne as Trophies into Camp. I have not yet got in the return of our casualties, but fear it is rather large. Only one Officer however, has been mortally wounded, Sheriff of the 2nd Fusiliers, but I regret to say both Brig'r Showers and Major Coke were wounded, neither I am happy to say dangerously. It is very unfortunate how our best Officers manage to get hit, the rascals pick out all mounted Officers especially. Nicholson with his Force will not join me until the day after tomorrow. The Insurgents had I think one or two more Guns out, some say heavy ones, but this is doubtful, and which we should have also taken if Showers had not been wounded. The business would have been complete, but both Showers and Coke being wounded there was no one to take the Command apparently or who knew where to look for these Guns. However our men are much elated with what they did do, it will do them good after waiting so long behind their breastworks without having an opportunity to close with the Pandies. Coke's men took two of the Guns, and are very proud of it. I am very nearly quite well again.

**NOTE.** The force marched down the road while it was still dark, and at dawn completely surprised the enemy at Ludlow Castle. A bayonet charge completed the rout of this outpost, and every man caught was killed, about 300 in all. Brigadier Showers was wounded in the chest and hand, while dealing with the rebels who had fled into neighbouring houses. The command devolved on Coke, who in turn was wounded in the leg while seizing

ne of the captured guns. Greathed of the King's was then sent to take command and unfortunately was not aware of the existence of two more guns which were concealed in the undergrowth near the river. These same guns were used by the enemy during the retirement, and it was from a piece of shell from one of them that Lieut. D. F. Sherrieff of the 2nd Fusiliers was mortally wounded.

Wilson speaks of a 2 pr. gun being captured. It was in reality a 24-pr. howitzer.

The casualties amounted to one officer killed and seven wounded, 19 men killed, 5 missing and 85 wounded. Of the total 34 were in the 1st Fusiliers and 33 in Coke's Corps. The other officers wounded were Lient. A. H. Lindsay of the Artillery, Captain S. Greville and Lient. A. G. Owen of the 1st Fusiliers, Lient. F. R. Maunsell of the Engineers, and Lient F. C. Innes, 60th N. I.

The guns were brought into camp by the 1st Fusiliers and Coke's Corps by six o'clock, and as Wilson states, the affair did much to raise the spirit of the troops.

This day Nicholson left to rejoin his column which was now at Panipat. Wilson was endeavouring to obtain communication with Havelock, but his letters had been intercepted and published by the rebels. To avoid this, he sent a letter on this date to Havelock *vi* Agra written in the French language but in Greek characters.

#### XCIV

*Camp before Delhi,  
13th. August 1857.*

I have given up all hopes now of Sir H. Lawrence being alive, the report has been confirmed from so many quarters. We hear nothing from the Force below. I suspect Havelock must have had a more difficult job at Lucknow than he expected. I hope he will not be delayed there long. My loss yesterday morning was much heavier than I bargained for 19 killed and 93 wounded. Of the latter however a good many were very trifling wounds mere scratches. Still such losses weaken me very much, while the mutineers have no end of men. Our blow of yesterday does not appear to have any effect upon them except to make them angry. They attacked my picquets 3 time last night. They did not however close and we sustained no loss. They are still out harassing us as usual. What would I not give for a few days peace and quietness with you, Dearest, but I can see little prospect of this till the force from below comes up to Delhi. It is wonderful how these rascally Mutineers hold together, with out cutting one another's throats. Baird Smith was slightly

***The Mutiny Day by Day.***

hit yesterday evening, only a contusion above his ankle from a shrapnell shell which burst over my head.

God bless and protect you, Dearest,

ever your own

A. Wilson

Archdale.

You may see by the above how my head is bothered.

**NOTE.** The General would have been much more worried had he realised that instead of being reinforced by the force "from below", he would have to take part himself in the relief of that force. Havelock did not relieve the small garrison at the Residency till after the capture of Delhi, and on this date he was actually retiring on Cawnpore after his third battle at Basharatganj. So far from helping Wilson, it was largely owing to the success achieved by Wilson at Delhi that Havelock was enabled to succeed in an undertaking which he had hoped to complete within a week of his departure from Cawnpore.

In spite of the raid on Ludlow Castle, the enemy kept up a cannonade all night, and all the following day. A battery of 24-prs was erected on the far side of the river, opposite Metcalfe House, and this proved a fresh source of annoyance, as it could not be reached from the position on the Ridge. The enemy too discovered a large store of rockets, and used them from Ludlow Castle on the picquets. This practice was stopped for a time by an explosion but afterwards these weapons became a constant menace to the Camp. We learn that in the afternoon the band of the King's played in camp on the Mall which was the name given to the road from Fagstaff Tower to the canal bridge,

**XCV**

*Camp before Delhi,*

*14th August, 57. 4 p.m.*

Nicholson joined me with his Force this morning. I have a little more than 5,000 infantry, but I can do nothing towards battering the Town and making a breach until my siege train comes up, which will not be till the beginning of next month. The Mutineers are too much on the alert, for any hope of being able to surprise them and blow open their gates, and even if I could I do not think it would be good policy as yet, as they would escape out of the City with their light Guns, and overrun and harass the whole country. We could only spare a small Brigade to go after them, and they would bolt in every direction. If we can hold them in check till Grant or Havelock

come up, they will be unable to escape except as an unarmed rabble. There you have my policy, a secret for you, Dear. I have been much bothered today by two Queen's Officers, Col's Dennis and Campbell of the 52nd. both senior to Nicholson and unwilling to serve under him. The former also is Senior to Showers, and claiming a Brigade Command. It is hard upon them to serve under Nicholson who is only a Lt. Colonel, but as I tell them he has been appointed a Brig'r Gen'l by the Gov' Gen'l right or wrong and I can't interfere with his orders, even if I wished to. I have made a kind of compromise with them, putting them on the same roster as Brigadiers, so that they will not clash by having to take duties under Nicholson, but I believe Dennis will leave the Camp. I gave him leave to do so, and he seemed inclined to avail himself of it. I am writing against time. No news.

**NOTE.**— Nicholson brought with him into camp some 3,000 men of whom 1100 were Europeans. His force comprised Captain Bouchier's Troop of European Horse Artillery, the 52nd Light Infantry, the left wing of the 61st Foot from Ferozepore, 200 Multani Horse and the 2nd Punjab Infantry. This contingent received a great welcome and was played in by the band of the King's.

While Nicholson was a hero to the army, his arrival created much difficulty, as Wilson observes. His appointment as Brigadier-General gave great umbrage to the British Service officers, some of whom went so far as to declare that it constituted an infringement of the Royal warrant. Colonel J. L. Dennis and Colonel G. Campbell of the 52nd were senior not only to Nicholson but also to Showers, and in order to adjust matters the brigades had to be rearranged. Sir Henry Norman states definitely that the two full Colonels of the 52nd were not made Brigadiers, but though they had no brigades they were clearly treated as of that rank, a statement for which the authority of the General must be held sufficient.

Under the new scheme, which involved the alteration of several camps, a troublesome task owing to the now rotten state of the tents, the infantry brigades were as follows:—

*1st Brigade.*

Brigadier St. G. D. Showers, 2nd Fusiliers, Commanding.

Captain C. F. Simpson, 8th N. I., Brigade Major.

*Troops* — H. M. 75th Foot.

2nd Fusiliers.

Kumaon Battalion.

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### ***2nd Brigade.***

Brigadier J Longfield, the King's, Commanding.

Captain H. Nicoll, 50th N. I., Brigade-Major.

*Troops.*— H. M. 52nd Light Infantry.

H. M. 60th Rifles (six companies).

Sirmoor Battalion.

### ***3rd Brigade.***

Brigadier W. Jones, 61st Foot, Commanding.

Captain H. G. H. Burnside, 61st Foot. Brigade-Major.

*Troop.*— H. M. 8th, the King's (five companies).

4th Punjab Infantry (Rothney's Sikhs).

H. M. 61st Foot.

### ***4th Brigade.***

Brigadier-General J. Nicholson, 27th N. I., Commanding.

Captain S. I. Blane, 52nd L. I. Brigade Major.

*Troops.*—1st Fusiliers,

1st Punjab Infantry (Coke's Corps).

2nd Punjab Infantry (Green's Sikhs).

The guides were not brigaded.

On this date Hodson, taking with him young Hugh Gough (afterwards General Sir Hugh Gough, V. C., G. C. B. of the 3rd Light Cavalry, rode off with the Guides Cavalry and his own newly raised corps of Sikhs, some 230 strong, to investigate the reported movement of the enemy towards Panipat. The rebels were said to number about a thousand, with two guns, their objective being apparently to attack the British lines of communication, or else to raid Hansi and Jind. Four other British Officers accompanied the mission. On the first march Hodson surprised and almost destroyed a party of Cavalry drawn from several regiments, the leader, Risaldar Basharat Ali of the 1st Irregular Cavalry, being captured and shot. Hodson then pushed on to Rohtak, where he came into contact with Babar Khan, a leading Rangar. A skirmish ensued, in which 13 of the enemy were killed, and following day another fight occurred with Babar Khan, who after losing fifty men decamped. Rohtak was then evacuated by the rebels, and Hodson returned to Delhi on the 23rd, having lost none in killed and only 16, including Lieut. Gough, wounded.

Wilson's definite declaration of his intentions confirms the opinion already formed that he felt his role to be that of a containing force until he could make certain of success. To storm Delhi at great cost and to scatter the main collection of the rebels over all Hindustan would have produced a still more difficult situation. The rebellion had begun with the army, but months of lawlessness had already affected the population as a whole, a change which was clearly realised when the task of general pacification was undertaken. Wilson set his heart on delivering a heavy blow, and he was not to be shaken from his determination to carry out his considered duty in an effective manner.



## XCVI.

*Camp before Delhi,  
15th August 1857, 12 noon.*

I received yours of the 11th this morning, and so you are sending all your contributions addressed to me, on the supposition, I suppose that I have the least to do of any man in Camp. Never mind, I will see and get some one to take charge of and distribute them. I am very glad you have sent a separate parcel for the little Ghoorkhas: they and their Commanding Officer deserve everything that can be given them. I do not know what we should have done without them. I only wish they had been 1000 strong instead of the weak Regiment they are.

I am afraid, Dearest, I must have written you a very cross letter on the 4th, you must make allowances for me and forgive me. I remember I was very much worried with different matters on that day and your letter instead of soothing me as they generally do jarred somewhat on my feeling. Last night for a wonder was one of perfect quiet owing probably to a heavy rain we had yesterday afternoon, and which must have wetted some of the Pandies. They are at it again however today potting away from a distance. I am run out of writing paper. Can you get me any at Landour? The pink paper Forde sold is the best, but I suppose it is all sold long ago. I am very well in health but am feeling one of my fits of weariness and prostration again today, owing I fancy to the damp from yesterday's rain.

**NOTE.**—No news came in from Hodson, who had disappeared in an unknown direction, and his whereabouts became the more uncertain as a message reached the Camp from Colonel Dunsford to say that nothing had been heard at Panipat of any enemy force in that neighbourhood. A letter came from Agra this day, in which the Lieutenant Governor pointed out that the Government of India had expected something more from Sir Henry Barnard than the mere repulse of enemy attacks. The comment was typical of the civil authorities. They had starved the army, and in the hour of need they expected miracles. Wilson chafed under a sense of injustice and his strong representations of the actual position of affairs did not serve to render him too popular with the powers at Calcutta. His cautious determination to ensure success caused even Sir John Lawrence to criticise him for a supposed want of vigour, and eventually led that great administrator to give all the credit for the outcome to more impetuous officers of the school of Nicholson.

**The Mutiny Day by Day.**

XCVII.

*Camp before Delhi,  
16th August 1857 12 noon.*

I was near making such a mistake yesterday. I had enclosed a letter I had written to Mr. Colvin in your envelope instead of the one I had written to you. I found it out just in time to save it as the Dawk was just going out. The way in which I found it out was by giving as I supposed the letter to Mr. Colvin to Greathed to read, when he said, "Why, this is for Mrs. Wilson". You would have been rather astonished to receive Mr. C's letter. Last night I received your dear anxious letter about my health. I do, Dearest, take as much care of myself as I can, and I can assure you I get no end of whip from the good Doctor about it. I have more reason than ever now to take care of myself, as I am quite sure if anything happened to me, there would be a blow up between Nicholson and the Queen's officers. They would refuse to serve under him and the public service would suffer.

Poor old Fop! I expect every day now to hear he is gone, and in his present state it is well he should. We are going on here much in the same state only Pandy's attacks are weaker and weaker every day. The surprise of the 12th seems to have had a good effect, and they have given us no further annoyance on the Cashmere Gate side. They appear to be a good deal disheartened, and I believe a good many are sneaking off to their homes. The neck of the Insurrection is loosened, and if Grant or Havelock would only come up quickly, would be soon entirely broken. I am very well again, only feeling the last two day's heat rather, another storm seems brewing, which will, I hope, give some cool air.

**NOTE.**—The advent of Nicholson was not without its disadvantages, as his forceful personality tended to mar the spirit of harmony which hitherto had been so conspicuous in the camp. Wilson had to act continuously as a peacemaker, and these squabbles worried him greatly. He had the highest opinion of Nicholson as a fighting man, but it is doubtful if any close friendship existed between them. The fact that Nicholson, intentionally or not, gave Lawrence to believe that he was the real commander at Delhi, a belief which became almost general amid the glamour which surrounded Nicholson's glorious end, served to deprive Wilson of much credit that was his due, and at the time could not have tended to the development

of very cordial relations. Nevertheless Wilson exhibited no sign of jealousy at any time, though subsequently he spoke freely enough about those junior officers who assumed the role of partisans and ventured to criticise the policy of the General.

The Camp during these days of comparative rest was in excellent spirits. In the afternoons the band played in the main street, leading westwards from the Flagstaff Tower, to a crowded audience.

Towards evening news arrived from Hodson reporting his first encounter with the enemy. Less cheering was the information that morning from the batteries in front of Hindu Rao's house that the priming powder of the guns had been tampered with. Suspicion fell on the disarmed artillerymen employed in the batteries, and the result of the inquiry was that two were hanged. The same day an order enjoining increased watchfulness was issued by the Brigadier General. Colonel Keith Young remarks—"Brigadier Wilson has always been very suspicious of the Natives who have anything to say about the guns, and this business will make him doubly so. These men are all Poorbeahs, and we have not as yet had the least reason to suspect anything wrong with the Punjabee or Goorkha regiments from which I believe there has not been a single desertion since they joined us."

#### XCVIII.

*Camp before Delhi,*

*17th August, 1 p. m.*

I received yours of the 15th this morning with Jane's pleasant letter. How I wish were among them all again! I also received the parcel of waistcoats. Thanks for them, Dearest. The news you send me of Bareilly, if true, is very good. I hope soon to see all the Hindoos and Mussulmans fighting against each other. I have nothing to send you to-day. We have a good deal of rain just now which when it clears will I hope leave us cooler than we have lately had it, but it affects me a good deal, as damp weather always does. I have a bit of a headache to-day and otherwise uncomfortable.

Hodson whom I have sent out with a party of Horse to watch a party of Pandies who have gone to Rohtuck, cut up a party of a Russaldar and 25 Irregular Horse yesterday. He is still out on their tracks.

NORA.—The rain cleared off in the afternoon, but the force remained undisturbed. Action was suspended till the arrival of the siege-train and this was not likely to arrive for a week. Letters came this day from Agra whence they had been despatched on the 12th, but they contained no information beyond the fact that all was well at that station.

***The Mutiny Day by Day.***

XCIX.

*Camp before Delhi,  
18th August 1857, 3 p.m.*

Since early morning I have been hard at work with my pen, and can only snatch a moment to write you a few lines. It is killing work I have to go through, and my poor head is often near to split. I pray God will give me aid and assistance and save me from breaking down altogether. I have made over the distribution of your packages to Dr. Tritton, who will give to the Hospitals what is most useful for the sick and wounded and distribute the remainder where most required. I was rather amused to see pocket-books in the Menu, the men won't know what to do with them. The books of light reading will be a great catch. I have written to Hogge to send over all such books he can find in my Library, and to levy contributions from others. I was quite distressed on visiting some of the Hospitals yesterday, that the poor sick and wounded had nothing to while away the long dreary hours. I am pretty well again.

NOTE.—Wilson detested office work and since he succeeded to the command found his correspondence a heavy burden.

His concern for the sick was great, the more so as the hospital returns, were increasing to an alarming extent. The effectives at this date numbered 3736 Europeans and 4386 Indians, while there were altogether 1535 sick and 304 wounded in hospital, in spite of the fact that several hundreds had been already evacuated to Ambala. Things steadily got worse as the unhealthy season progressed, and before the assault took place the depletion of the force assumed very serious proportions.

C.

*Camp before Delhi,  
19th August, 57, 2 p.m.*

No letter from you since I wrote yesterday, but I have received a pretty note from Mrs. Hogge telling me she has made me (volens volens) Godpapa to her little girl, and that it was done at your request, rather bold of you, knowing as you do, my general dislike to undertake such a responsibility. However I have written a reply to-day, to say that I am much pleased at being selected as sponsor to the child of my old friend, the more

so, as I was joined in the duties with you. So you see I am not *very angry* with you. 'Ellen Archdale Wilson Hogge' is a pretty name certainly, and I hope the young lady will do justice to it and behave herself properly.

There is a party of Mutineers who have moved in the direction of Rohtuck and Hanzi, on a plundering expedition, and who have been threatening Jheend and some of our well wishers in our Rear, that have been causing some disquietude for the last two or three days, but I hope they will soon be disposed of. The Pandies have been very quiet for some days, and we hear have great dissensions among themselves.

No intelligence yet of Havelock having relieved Lucknow.

I am well in health but very fagged, I can't get more than four or five hours' sleep at night, and that is frequently disturbed by letters coming in, I also get constant cramps in my feet and legs.

NOTE.—Hardly a gun was fired on either side during the day, but news was received that the rebels had once again commenced the preparation of a battery on the right flank of the position.

As a matter of fact news was received from Havelock, but the letter was obviously belated and merely repeated the information that he was advancing at Lucknow after replenishing his supply of ammunition from Cawnpore. Further advices from Agra conveying the views of Lord Canning increased the indignation of the force, who felt that the lack of credit given to them for keeping at bay the bulk of the native army was due mainly to the realisation by the Governor General of his disastrous error in leaving Delhi and its priceless arsenal to the care of Indian troops. Indignation, however, turned to derision at the pronouncement that "Government was sorry to learn from private sources that up to the 19th June the city was still in the possession of the mutineers."

Impatience was growing elsewhere than at Calcutta, and with less reason. Writing the same day, Hervey Greathed expostulated forcibly:— "It is bad enough not to be appreciated by Governor-Generals; but if the wives of the camp turn against him, no reward will compensate for the detraction. It would be sufficient answer to say that the mass of the officers in camp are satisfied that the delay is for the good of the cause." He adds:— "If the truth were all known, the world would wonder at the way in which such a small number of English held such a force in check, and defeated them at every turn, at the worst season of the year."

It is probable that Fabius was no better pleased with the uninformed criticism which gave him the derisive nickname of Cunctator and thereby provided him with an honoured niche in the temple of History.

**The Mutiny Day by Day.**

CI

*Camp before Delhi,  
20th August 1857, 3 p.m.*

I am reduced now to this small paper, and have very little even of that, so if you do not provide me soon I shall not be able to write to you. Young Somerville's wound was so slight that I do not believe he left the Battery on account of it, he certainly did not go on the Sick List but has regularly taken his turn of duty since. Can't you give me some enlivening news? Dearest, sometimes, of what goes on at Landour or Mussourie. I have been looking back at your letters, and find them all without exception very prosy. With such a congregation as you have up there surely there must be frequent scenes and occurrences that would raise a laugh or even a smile now and then. I want something to enliven me for I feel I am getting very dull and stupid myself.

Pandies are remaining very quiet brewing mischief, I suppose. A party I sent out to our rear under Nicholson last night were forced to come back from bad weather, and from finding the country almost impassable. Hodson is still out and has given me great anxiety from exceeding his orders.

A Mrs. Leeson came in from the City yesterday. She is a half caste and says she has been saved and well treated by a Mahamedau Moolvie (an Affghan) and his family. I distrust her, however, much, and shall send her out of Camp to Umballa as quick as possible. No. news. Very tired.

NOTE—Mrs. Leeson was the wife of a European road sergeant. During the outbreak on the 11th May her children were murdered before her eyes but she herself escaped and found refuge in the house of a friendly Affghan, who had treated her with the utmost consideration and then had enabled her to escape in the disguise of an *arak*. She remained only till she could be sent to Ambala on the 24th August, in the tent of Mrs. Tytler, the sole Lady in the camp, and the wife of Captain Tytler of the 38th N. I.

Hodson was ordered back, as his report showed an inclination to continue his independent mission and to move on indefinitely. The expedition under Nicholson proved a mere rehearsal, as he proceeded no further than Alipur. The intention was that this column which consisted of Tombs' Troop, 200 men of the 1st Fusiliers, and some native cavalry and infantry, should act in conjunction with Hodson and intercept the enemy infantry and guns on their return from Rohtak.

## CII

*Camp before Delhi,**21st August, 1857, 1 p.m.*

I have some news for you to-day which will please you; last night I received a despatch from Brig'r Gen'l Neill at Cawnpore, sending me a General Order by the Governor-General in Council appointing me to the Command of this Force in Sir H. Barnard's room, and conferring on me the Rank of Major-General for special service. Rank and distinction come thick upon me, Dearest, proving at all events the confidence that is placed in me, but shewing at the same time how much more than I fear I shall be able to perform. May the Almighty God give me His gracious aid and support, direct my judgment right, and enable me to perform what is required of me, and may everything I do increase His honour and His glory. I received yours of the 17th. this morning, Dearest. It is true that the 1st Fuziliers who took two of the guns, mounted one of them with fixed Bayonets, and rode into Camp in triumph, but they did not ride up to my tent. They would not have found me there if they had, as I was on the Ridge, watching the attack. Neill's letter to me was dated the 4th. There was a native report that Havelock had relieved Lucknow, but we have no official report of it. He sent me a very nice letter giving the best intelligence of what had occurred that we have yet seen. He says Havelock's Force will come on to Agra as soon as Lucknow is relieved, going first to Futtyghur, and from Agra will hasten on here. Sir P. Grant does not appear to have left Calcutta or to have any intention of doing so. I am rather in a doubt whether I shall be obliged to give up the command of the Regiment now or not. I will not do so unless I am forced. If it was any man I could trust I would gladly give it up, but Garbett is totally unfit for such a command. The Officers would not respect him, and the Regt. would go to the Dogs. John was ailing a little yesterday. I went to see him in the evening but he did not appear to have much the matter with him. We have I am sorry to say a deal of sickness in the Camp just now. I hope it may not continue or we shall be crippled.

## *The Mutiny Day by Day.*

**NOTE**— The promotion of Archdale Wilson gave general satisfaction to the Force, and was felt to be some amends for the criticisms against which they were protesting. It was particularly galling to read the remarks of the authorities as to the weakness of the walls of Delhi, when the glacis covered half the wall and rendered it necessary for a breaching battery to be pushed almost to the crest to be effective. There were, of course, critics in the camp as well. Some urged that the arrival of Nicholson and his force demanded the occupation of the Idgah Ridge with the object of obliterating the rebel battery at Kishanganj; but this large extension of the front would have involved the withdrawal of a considerable portion of the force from the line which would have to be adopted when the real siege commenced. Others contended that the obnoxious battery should be taken by assault, but Wilson preferred to use his artillery power in place of priceless lives, and the result showed his wisdom. "He is an able commander, wrote Greathed, and is cool and collected, both in camp and under fire."

The enemy had discovered a new method of causing annoyance, by means of 32-pound rockets, of which they had a large store in the magazine. These were directed at the Ridge from Ludlow Castle, and every evening the force was subjected to a bombardment from these erratic but unpleasant missiles. A further development occurred on this day, as a 24-pounder gun and a rocket tube were placed in position on the opposite side of the Jumna, about 2,000 yards from the Metcalfe House outpost. The damage inflicted was small, but it was thought desirable to move Coke's camp, which was situated on the east side of the Ridge by the extreme left of the position. After a few days the attempt was abandoned by the enemy, although the batteries on the Ridge were wholly unable to retaliate.

### CIII

*Camp before Delhi.*

*23rd August 1857, 3 p.m.*

Received yours of the 19th. I cannot conceive why you got no letter from me on that day, unless the rascally Postmaster has sent it round by Meerut, as he frequently has done, and for which I gave him a reprimand only a few days ago. Let me know if this has been the case. Reid deserves everything I can say of him, and any honour I can obtain for him. The gallant manner in which ever since the 8th June he has held the post then entrusted to him, (at my particular request) has been the admiration of the whole Force, and I shall feel always deeply indebted to him, for his untiring exertions enabled the Force in Camp to take their rest, with the certainty



that he will not warn them to turn out, unless there is an actual necessity. No false alarms even come from his position. I can *trust him* as I can *myself*. I have given up all hope of receiving any aid from below, and as soon as the Siege Train arrives, have made up my mind to commence operations, and endeavour to take the place with the Force I have. It will be a desperate undertaking but with God's aid and blessing on our cause, I trust we shall succeed.

This is for your own private ear alone, Dearest. We had our day of Prayer and Humiliation last Sunday, (this day week) I trust it was accepted. I am quite well again, but cannot get a sufficient sound rest at night, whether from overwork during the day, or what.

**NOTE**—The missing letter arrived in due course, but that of 22nd August was lost. The Meerut route at this time was unsafe, and the runners were now a special object of attention on the part of the disaffected. Three of them, bringing letters from Cawnpore, were caught and hanged by the rebel Nawab of Malagarh in the Bulandshahr district.

Nothing happened on the 22nd beyond the usual bombardment. Stores were beginning to arrive, and this day brought a large consignment of shells. A commencement was made with a new battery for heavy guns, some 300 yards in advance of the Sammy House, towards the Mori Bastion. This forward movement was watched with the greatest interest by the camp but the Engineers had no pleasant task till the work was completed and the long communication trench was sufficiently deep to protect the working-parties from the constant showers of grape.

This undertaking gave the force a clear idea of the intentions of the General, who had now come to a definite conclusion from which he never wavered. The plan of attack by regular approaches was regarded as far more satisfactory and business like than a surprise or an open escalade, and all ranks settled down cheerfully to the prospect of a vigorous siege. The train was already at Ambala, and it was now a matter of active preparation for a definite undertaking.

#### CIV.

*Camp before Delhi,*

*24th August 1857, 12 noon.*

I have no news for you to-day, except the arrival in Camp of Burn and Tenuant. I have not seen the former yet and do not know what he intends to do, the latter looks very well and jolly. We are getting very hard up for Artillery Officers. Out of 23 we have for duty in the heavy Batteries 10 are sick or wounded, and it will be frightful hard work when I open

***The Mutiny Day by Day.***

my new Batteries on the City. I do not know what I shall do, I have asked for Hogge to be sent over to take charge of the Park. Young is quite unequal to the work from inexperience. Sickness also is much on the increase in Camp, and we have had several cases of cholera lately. I pray God we are not to be cut down by that dreadful scourge. Most of the late cases have been among the later arrivals.

NOTE.—Hodson returned late the previous evening with all his party, not having lost a man. His expedition founded the reputation of Hodson's Horse, who had hitherto been regarded with some amusement and had been given all sorts of nicknames, the favourite being the "Alu Bukharas."

Colonel Pelham Burn had arrived from Mussoorie and Major Tennant from Meerut. Col. C. Hogge reached the camp from Meerut on the 2nd September and took over charge from Captain J. Young, Commissary of Ordnance.

Fever was now raging in the camp, especially among the Indian troops and the Gurkhas, the latter being wholly unaccustomed to the plains at this time of year.

## CV.

*Camp before Delhi,*

*25th August 1857, 3 p.m.*

Yesterday the Rebels sent out a large Force of Infantry and Cavalry with 22 Guns, with the avowed intention of getting to our rear, cutting off our supplies, and no doubt of attacking our Siege Train. I was consequently obliged to send out a moveable Column this morning under Nicholson, to try and intercept them. He has 1600 Infantry, 16 Guns and 500 Cavalry with him, and if he can come up with them, will I have no doubt, make a good example of them, but unfortunately as soon as he had got fairly out of Camp, it commenced raining and has been pouring ever since. It was just the same when I last sent him out, he was obliged to return, and I fear he will be obliged to do the same again. The only heavy rain we have had has been when the Moveable Column has gone out. This is very discouraging, and I fear my poor Troops will suffer greatly.

I am left in Camp very weakhanded and shall be very uneasy until I get this Force back again. It is so dark that I can hardly see to write and this paper is so thin and imbibes the damp so much I can hardly write on it.

NOTE.—Wilson was at all times ready to seize an opportunity of coming to blows with the enemy in the open. The rebel force, estimated at anything from 6000 to 12,000 men and from eight to twenty-two guns, from the Bareilly and Nimach Brigades, left Delhi by the old Rewari road, and it was not known whether they had proceeded towards Gurgaon or in the direction of Rohtak. Their objective, however, was plain and Wilson decided at once to send an adequate column to deal with this immediate threat. The force comprised 16 Horse Artillery guns, under Major Tombs, with Captains Remington and Blunt, 30 Sappers under Lieutenant M. G. Geneste; one squadron 9th Lancers, under Lieutenant Sarel; one squadron Guides Cavalry under Captain Sanford, one squadron 2nd Punjab Cavalry, under Lieutenant Nicholson; 200 Multani Horse, under Lieutenant Lind; 420 of H. M. 61st, under Lieutenant-Colonel Rainey; the 1st European Fusiliers, 380 strong, under Major G. O. Jacob; the 1st Punjab Infantry, 400 men, under Lieutenant W. H. Lumsden; and 400 men of the 2nd Punjab Infantry under Captain G. W. G. Green.

The force paraded long before daylight and moved off at 6 a. m. After following the road for a short distance, Nicholson changed direction to the left and began his struggles with the mud. Two large swamps had to be crossed in the six miles between the road and the village of Nanglot, which was reached in about three hours. A halt was there called for three or four hours, and then information was received that the enemy had taken up a position at Najafgarh, occupying a strong line which extended from the canal bridge on their extreme right for about a mile and three-quarters to a large *sarai* in the town. In this *sarai* were four guns, and at least nine others were distributed along the line, all protected by entrenchments with parapets and heavy embrasures.

Nicholson at once pushed on. The rain had ceased and spirits of the force rose. The route was almost all morass, but the distance was covered with great rapidity and by 4 p. m. the column was before Najafgarh. The baggage was left on the far side of a swollen stream which was forded under fire. At 5 p. m. the guns opened fire and the infantry, with the exception of 100 men from each corps held in reserve, were formed up in two lines about 900 yards from the *sarai*. This was the key to the position and it was the intention of Nicholson to attack at this point and then to roll up the line as far as the canal. The 61st and the 1st Europeans advanced on the *sarai* at the slope, never firing a shot till within a hundred yards, and then charged. Lieutenant T. Gabbett of the 61st led his men into the enclosure, but was killed. Within the *sarai* a desperate fight ensued and large numbers of the enemy were bayoneted. Leaving the 1st Punjabis to clear the town, Nicholson then wheeled left and drove the enemy headlong down their entrenchment. Their leading gun stuck fast in the mud, and all thirteen were captured. Tombs took full advantage of the target offered by the retreating rebels and punished them severely at close range.

The small village of Nagli in the right rear of the force was still held, and Coke's Corps met with heavy resistance. Lieutenant Lumsden was killed,

*The Mutiny Day by Day.*

and though the 61st were sent up in support, the place was not captured, but he enemy evacuated it during the night. In this attack Ensign S. B. Elkington of the 61st was mortally wounded.

Nicholson remained on the field during the night, while Lieutenant Geneste blew up the canal bridge. He had achieved a signal success, but he had no supplies and his troops remained without food. In these circumstances he could not, had he possessed the information for the lack of which he blamed others, have proceeded to Palam to deal with the Bareilly Brigade. His opponents were some 3000 or more men of the Nimach Brigade, which is said to have reached Delhi about 600 strong.

In addition to the three officers named, Assistant Surgeon W. W. Ireland of the Horse Artillery was wounded, 23 other ranks were killed and 68 wounded.

Nicholson marched back the next day and reached camp by sun-down, his exhausted force being played in by the hands and given a rousing welcome. He brought in the captured guns, but for lack of transport was obliged to blow up the ammunition and tumbrils.

## CVI

*Camp before Delhi,  
26th August 1857, 10 a. m.*

I have some good news to send you to-day, Dearest. The Column I sent out yesterday morning under Nicholson attacked the enemy yesterday afternoon at half past 4 o'clock, took all their Guns—11 or 12, and destroyed the only bridge by which the Mutineers can get to our Rear, without going a round-about of some 50 miles. I have only received a short pencil note from Nicholson as yet which gives no particulars, but our Troops must have made incredible exertions to have got there, a distance I should say of upwards of 20 miles, and to have fought a battle at the end of it. The Country over which they went for the most part in a very swampy state, and there was a drizzling rain all day; luckily they had not such heavy rain as we had in camp or they would have been drowned. It poured a deluge here. If I hear any more particulars before I close this, I will tell you. We have lost, I hear, a fine young Officer, in Lumsden of Coke's Corps, and Dr. Ireland attached to the Artillery. I have given up all thoughts of waiting for reinforcements from below, and as soon as the Train arrives

must try and take Delhi unaided. There will be however, some delay yet, as I must wait for the Rifles and Artillery men from Meerut, who cannot, I fear, be here before the 4th or 5th Prox<sup>o</sup>. Give what you can, Dearest, to the fund, but take care not to bring yourself into distress. You know how difficult it is for me to get funds sent up to you.

5 p. m. just as I had written thus far I received a report that the Paudies had come out again to attack us, I have been out on the Ridge ever since. The attack had ended, or nearly so, in the usual way, and seems nearly over now. I have heard nothing more from Nicholson except that he comes back to-night with his Force and captured 13 Guns.

NOTE—Wilson, on hearing of the success achieved, at once sent out bullocks to bring in the captured guns and food for the tired column. Meanwhile the rebels, thinking that the camp had been depleted, made a simultaneous attack on all the picquets. This developed into a more serious demonstration which never materialised, as the reply from the batteries inflicted heavy loss and drove the enemy back to Ludlow Castle and the city walls. The day, however, caused a loss of eight killed and thirteen wounded. Sickness too was rife, and the hospital returns were swollen by the exposure to which the column under Nicholson had been subjected, so that by the end of August no fewer than 2,368 men were on the sick list.

This fact was not ignored by Wilson when he made up his mind definitely to take Delhi with the means at his disposal. Information from Havelock showed clearly that the Delhi field force must stand by itself, but the General had no illusions as to the nature of the task before him. Hitherto in the firm assurance of receiving substantial assistance from below, Wilson had been more than doubtful of his chances of success in attempting to storm Delhi without such reinforcements. He had on the 20th August prepared an appreciation of the position, based on this expectation; but when he learned the situation in which Havelock was placed and after the blow inflicted by the column under Nicholson, he came to the conclusion that an assault after such bombardment as could be undertaken might be successful. At all events he was prepared to take the risk. It was not, as has been so often alleged, that he yielded his opinion to the insistence of the Engineers. He asked Baird Smith for an opinion because he knew in his heart that an assault was the only chance; but while he realised the risk involved, he desired to know whether others considered it warrantable. His attitude is summed up in his remarks on the minute by Baird Smith. "I am willing to try this hazard—the more so as I cannot suggest any other plan to meet our difficulties." That the scheme was really and from the first that of Wilson is clear from the original memorandum. In this he justifies his action in waiting on the Ridge for all possible reinforcements and then adds:—

***The Mutiny Day by Day.***

"I shall be reinforced by a siege-train from Ferozepore by the end of this or the beginning of next month, when I intend to commence more offensive operations against the city." It is true that he was far from confident of his ability to take the city with the means at his disposal, and he felt that in view of the promise of help he should not embark on a desperate venture unaided; but as soon as he knew for certain that assistance was out of the question, he came to a clear decision. Because of his honesty in stating his opinion, Wilson was afterwards stigmatised as faint-hearted. Because the risk was justified by the event, it became the fashion to extol his subordinates at the expense of the General; an unjust view which was exploited to the utmost by those who still had an Indian career before them.

## CVII.

*Camp before Delhi*

*27th August 1857, 12 noon.*

Nicholson's Force had all returned to Camp by 8 o'clock last night, having in 39 hours marched 20 miles, fought a battle gaining a glorious victory, routing in the most complete manner a large Force of the enemy, estimated at from 4000 to 6000 with great loss, capturing all his Guns, 13 in number; blew up and completely demolished the bridge by which alone they can annoy us, and marched back again. Considering that the Country was nearly impassable from swamps I look up on it as one of the most heroic instances of pluck and endurance on record, and does great credit as well to Nicholson as to the gallant fellows under him. The attack on our position here yesterday was made evidently under the impression that we had weakened ourselves so much by sending out this Force as not to have enough to defend our Batteries. They were woefully disappointed, and lost heavily. Altogether I suspect Pandey has been considerably confounded, they have not fired a shot today.

The reports you have received regarding Miss Jennings and Clifford being still alive, must be all false. I have spoken to Greathed on the subject who says that the man from whom he received the account of their murder, saw their dead bodies lying in the room. Greathed says he will take down this man's evidence and have it published in the Lahore Chronicle. Hogge started from Meerut the day before yesterday to join my Camp. I expect to see him here about the 2nd. or 3rd. Proximo

NOTE—Wilson was justly appreciative of the achievements of the column. The march accomplished in a moisture-laden atmosphere and a temperature approaching 100° was a wonderful performance which spoke much for the moral of the force, and the successful issue raised the spirits of the army to a higher level than ever. It is curious that Wilson omitted to note a point which must have given him great satisfaction. Five of the guns captured belonged to Mackenzie's Troop, and as one had been recovered previously, the full complement was again in British hands. Four more were of the celebrated battery known as the King's Own.

So confident were the rebels that the whole of the English force had gone to meet the expeditionary brigades that the attack on the Ridge was preceded by an excursion of unarmed men and even women bent on plundering the camp. The surprise they encountered added to their discomfiture and the losses inflicted on the assailants were unusually heavy.

## CVIII

*Camp before Delhi,  
28th August 1857, 12 noon.*

I had the pleasure of receiving your two dear gossiping letters of 24th and 25th. Thank you, dearest, for attending to my wishes, in sending me some of the Mussourie gossip. It is very amusing, and does me good to have a laugh now and then. The news we hear from Lucknow is not particularly good. It appears Havelock does not consider himself strong enough to attack Lucknow, and has recrossed the River to wait reinforcements. This is bad. I only hope the garrison at Lucknow will be able to hold out. I look for no help from below now, what I do must be done with my own Force. God grant I may succeed. My promotion to Major-General is for special service and therefore does not remove me from the Regiment, the command of which I retain. When this business is over, I may be reduced again, or may be made permanent. Greathed writes you may state with perfect confidence that Miss Jennings and Miss Clifford were both murdered on the 11th May, three servants of Mr. Clifford who had accompanied his sister witnessed the murder! I had intended to have written a longer letter today, but I have just heard these rascals have again moved from Delhi towards Nujufghur, and though I don't believe they intend anything serious, I must be prepared for them.

NOTE.—Havelock returned to Cawnpore on the 13th August after the third battle of Bhasharatganj, owing to his anxiety for his communications in consequence of the defection of the Gwalior contingent. On the 16th of August he defeated the Nana at Bithur, and then he remained at Cawnpore until the 19th of September. His position made it abundantly clear that Wilson could expect no help from that direction. In fact Havelock depended more on the victory achieved at Delhi for his success than on any other factor.

The further attempt by the rebels on the British lines of communication was an act of desperation on the part of Bakht Khan, who commanded the Bareilly Brigade. It was a futile undertaking, frustrated by the state of the country to be traversed. Wilson, on hearing of the venture, at once sent out Hodson to reconnoitre. He found Najafgarh all clear, and further investigation of the country beyond revealed no sign of movement by the enemy. He returned in the evening of the 29th, bringing in two wagons of ammunition which he had found abandoned near Najafgarh.

## CIX

*Camp before Delhi,  
29th August 1857, 3 p. m.*

The rascals have sunk our Boat at Baghput, and stopped our direct communication with Meerut.

The Rebels made a very faint attack upon our position at Hindoo Rao's last night. They are evidently quite cowed and disheartened, and I hope as soon as the Siege Train comes up, I shall be able to polish off Delhi. They promulgated the most ridiculous report in the City after the beating they got from Nicholson, that all the villagers had risen, 20,000 of them and had joined the beaten Force, attacked us, had recovered all the Guns we had captured, and taken 7 of ours besides. This was believed in the City for two days, and induced the second Force to go out. They have now found out their mistake, and have returned quite crestfallen. I sent out a party of Irregular Cavalry last night, who have just returned, with a report that no one is to be seen or heard of. Nicholson's victory will, I suspect, have great effect upon all the country round.

NOTE.—The interruption of the Meerut route no doubt accounts for the absence of two letters, those of the 31st and the 2nd September. The chief event of the day was the arrival of 5000 bullock-carts, mostly loaded with shells, the forerunners of the Siege Train. This was expected in camp by the 2nd September at earliest. Meanwhile the population within the walls were still ignorant of the ex-



tent of the disaster which had befallen the raiders at the hands of Nicholson. Supplies were actually sent out on elephants for the Nimach brigade, but this contingent never returned, the majority of the remnant having departed in panic to their homes.

CX

*Camp before Delhi,  
30th. August. 57.*

This morning I received your two dear letters of 26th and 27th, the letter enclosing those of Eliza and Sally. They already seem in a great state of alarm. What will they be when the next Mail comes in?

You ask me very impertinent questions, Dearest, about my intention. I hope it is not for the sake of retailing the answers. However I will tell you this much. I hope to do all I wish to do with the Siege Train in two or three days at furthest; our men could not possibly stand the exposure and fatigue they will have to undergo longer even if so long. News from Cawnpore is not very encouraging, and I much fear for the Lucknow Garrison. I hope we may be successful here.

I will do what I can, Dearest, to give you early intelligence, but on such a day as will be that of the assault, even paper, pen and ink will be a very difficult thing to find.

It is Sir Colin Campbell not Halkett who is coming out as Commander-in-Chief. The latter old Gentleman has been dead some time.

NOTE.—The General had made it known in camp that no matter when the Siege Train arrived, he would take no action till he received his reinforcements in the shape of artillerymen from Meerut. He knew that his numbers were insufficient even then to man the guns adequately in the event of any sustained bombardment, and men were of more concern to him than material. The Train was this day at Karnal. Meanwhile preparations were in progress for the advanced positions required for the siege. Work was conducted at night and few days passed without some casualties among the working-parties.

These methodical preparations appear to have given some annoyance to Sir John Lawrence, who was constantly urging Wilson to more hasty action. Rumours of wavering among the Sikhs had been spread abroad, though they had little foundation save in the imagination of those who feared that the Punjab would lose faith in the ultimate success of the British. On the other hand, there wa

***The Mutiny Day by Day.***

abundant evidence of increasing activity. The insurgents near Baghpat had been dealt with by a column from Meerut, and further trouble in that direction was stopped. The disarmed sepoys at Ambala, who were still occasioning suspicion, were confined in the jail, those who resisted being shot by a detachment of the King's. News was received of the effective action taken by the Agra garrison near Aligarh, and also of the heavy punishment inflicted on the 42nd N. I. by Havelock at Bithur.

On the 31st heavy rain fell, and this for a time stopped the cholera which was prevalent in camp, especially with the 61st Foot. No incident of any importance occurred. A small column from the city endeavoured feebly to interfere with the work proceeding in the advanced parallels, but was easily dispersed. Two Sikh sepoys were killed, and Lieut. W. E. Warrand of the Engineers had his arm taken off by a shot from the Mori Bastion. He survived amputation, however, and lived to rise to the rank of Major-General.

Wilson, with 2368 men in hospital, and sickness raging at the worst season of the year, realised the need of avoiding any unnecessary strain on his force. He declined to be moved from his resolution by the impatience of others and the narrow margin by which in the end he achieved victory justified his determination to the full.

**CXI**

*Camp before Delhi,*

*1st September 1857. 12 noon.*

We heard from Hogge yesterday; he had reached Panniput and will come on here I suspect, this afternoon. The Rifles and Artillery men were crossing the Jumna opposite Panniput. No news in camp today. Yesterday was the last day of the Mohurrim, and we fully expected an attack. They could not however, apparently agree about it, and it was no go. The sickness in camp has increased greatly, chiefly fever but we have had many cases of cholera chiefly confined to 52nd and 61st. We had heavy rain however, yesterday, which appears to have stopped it for a time. There were no cases last night. My Force has been sadly reduced by all this sickness, but it was to be expected at this season of the year, and at this place; still it is very dreadful. I hope we shall have a good deal more rain this month, in which case they say Delhi is not unhealthy.

At Peshawar they are worse than we are. J. Lawrence tells me there are not more than 1000 men fit for duty. Garbett's wound took a bad turn and he has been very ill. He was yesterday better, and I hope he will get over it; he will not be fit for

duty again here. Mackenzie, Money, Young and Thomson are all doing well, very nearly recovered. I am keeping well. The Siege Train will be here on the 4th or 5th, and I shall commence operations very soon after. May God grant us a glorious victory.

**NOTE** — There is no reference to an incident of this date which occurred on the left flank. A shrapnel fired from across the river burst over the 'stable picquet' at Meicalfe House, killing or wounding 13 men, the largest number hitherto struck by a single projectile during the siege.

It now became evident that the siege train could not arrive before the 5th September. Some of the transport had to be diverted in order to help the reinforcements from Meerut over the Jumna; but the delay enabled Wilson to push on his preparations and work on the more advanced saps was already in hand.

## CXII

*Camp before Delhi,  
3rd September 1857, 1 p.m.*

Your news about Sir H. Lawrence will I fear, prove like all such rumours untrue. When ever you get news like this, of one Lady having received a note from another Lady, who writes to a friend &c. mistrust it. I have long given up all hopes of Sir Henry being alive. We know the report of Havelock's having relieved Lucknow—even though he "*wrote himself*" to be untrue. You may be fully certain therefore that the other part of the news equally so. Your conclusions about the opening of the Batteries are also I regret to say, premature. The Siege Train comes in tomorrow, the Rifles and Artillery men on the 6th. Wild's Corps and the Jummoo Troops I don't expect before the 9th. On that day I hope to commence and 3 or 4 days later, I trust in God Delhi will be ours. You must not mention this. I do not mistrust your caution, dearest, but some how or other I find things ooze out in camp, that I have kept perfectly secret from everyone but yourself. I can't find out where they emanate from. Pandies are remaining remarkably quiet, but inside the city we hear they are quarrelling among themselves, and bullying the old King for pay, who has none to give them. They seem altogether in a very miserable condition.

**NOTE.**— It had become clear by this time that the rebel force had decreased materially in numbers. Defections had been frequent since the fight at Najafgarh.

## ***The Mutiny Day by Day.***

and this fact, coupled with the practical extermination of the Nimach Brigade weighed with Willson more than the impatience and optimism of the Engineers. Had the garrison of Delhi remained in the neighbourhood of 40,000, an assault without large reinforcements would have been a rash undertaking indeed; but now the strength was barely half that number and this change altered the complexion of affairs. The more certain he became of the reduction in the enemy force, the more confident Willson grew. He was not content to trust to a series of heroic exploits, for all the advice he was offered; as he knew well enough that continuous success in desperate ventures involved a demand on fortune that could not fairly be warranted by the law of probabilities.

Excitement was growing rapidly. News of trouble within the city was seized with avidity and magnified out of recognition; but Willson took care to be sure of his facts. He could not fail to be pleased, however, with the spirit of his force, and the formal request of the King's to lead the column of assault delighted him greatly.

His friend, Colonel C. Hodge of the Artillery, arrived this day and brought all the news from Meerut. There too rumour announced the relief of Lucknow, but Willson, who appreciated the difficulties of Havelock, refused to place any credence in tales begotten of expectation.

### CXIII

#### *Camp before Delhi.*

*4th. Sept. 1857, 3. p.m.*

I received your dear long letter of the 1st this morning, and wish I could send you one as long in return, but am so completely knocked up today with constant writing and going about in the sun, that I can only send you a few lines.

The Siege Train came in this morning all safe, and barring being very much knocked up I am quite well in health.

NOTE.—As work became more strenuous, Willson had ever-increasing cause to realise the weakness of his staff. So much had to be done, and in order to do it well he had to expose himself to a strain which nearly brought about a collapse at the most critical period of the siege and assault. His difficulty was great. Had he spared himself, the preparations would never have been completed; but had he broken down, the capture of Delhi and its effect on the rebellion might have been long postponed. He himself alone suffered from his devotion to duty. In the reaction which followed success, the victorious commander to whom success was due, was a sick and prematurely aged man, and public opinion, impressed by the pitiable figure, jumped at once to the conclusion that the worn-out General had been dragged along to victory, almost against his will, by younger and more active minds. This impression was shared by the authorities, including even Lord Lawrence, who failed signally to appreciate in its proper values the service rendered by Archdale Willson to the Empire.

## INFANTRY RANGE FINDERS & RANGE FINDING.

*By Lieut-Colonel H. P. Dela Bere, (Late) Royal Scots Fusiliers, Inspector of Guns and Rifles, Ishopore.*

The greater the accuracy of the rifle or machine gun, the greater the efficiency of the shooter or gunner, the greater the necessity that the range to the objective should be accurately known. Paradoxical as this may appear, yet it is a true axiom as the more concentrated the fire, the smaller the area of ground covered by the bullets.

The area of ground beaten by the best 75 per cent of shots fired is termed the zone of effective fire for it has been found by experiment that useful results can only be looked for when the Target is within those limits.

The effective zones of the rifle and Machine Gun with mark VII Ammunition are as follows—

### *Rifle*

		<i>Depth</i>		<i>Breadth</i>
500 yards	=	330 yards	×	7 feet.
1000 „	=	180 „	×	14 „
1500 „	=	150 „	×	28 „

### *Machine Gun (Vickers)*

500 yards	=	220 yards	×	2½ feet.
1000 „	=	140 20 „	×	5 „
1500 „	=	75 60 „	×	10 „
2000 „	=	70 50 „	×	20 „

If an error in estimation of the range is made equal to half the depth of the effective zone, the fire becomes ineffective; it consequently follows that if an officer desires to open fire at 1100 yards with the controlled fire of two platoons or a Company he is only permitted an error of range of about 85 yards each way i. e., if he gives the distance at 1050 or 1150 his fire will be ineffective.

Similarly with the Vickers gun, he is only permitted an error of 70 yards each way.

For this reason with rifle fire beyond 1000 yards "combined sights" might occasionally be advantageously employed, that is to say in the first instance half the firers would adjust their sights to 1050 and half to 1150 yards, so as to straddle the Target.

It will be seen therefore that the more expert the shooters and the more accurate the rifle, the greater the necessity for a correct knowledge of the range.

It has been found that individual fire is seldom ineffective beyond 600 yards. Within this distance therefore, individual soldiers should be able to judge distance with great accuracy, for it may be conjectured that most of the Targets that will offer themselves to the firer will be of small area—such as infantry firing over, through or round cover. The necessity of great accuracy will be seen from the following example; a firer notices a man looking over the top of a rise—the man is in reality 400 yards away—but the firer judges him to be 500 yards—the bullet therefore will pass some 8 inches over the head of the enemy, supposing that he exposes about 1 foot of his head and neck—an excessive exposure unless the enemy is firing. Any sportsman who has shot deer or ibex will know how easy it is to miss over or under owing to miscalculation of the range and yet fire is not opened at such animals except at very close distances. Advancing infantry exposing the whole of their bodies are exposed to effective rifle fire up to and within 600 yards if aim is taken at the ground line; errors in estimation of the distance are in this instance immaterial as the bullet does not rise more than about  $3\frac{1}{2}$  feet above the line of sight within this distance.

It may be argued that it is more advantageous at the longer distances, i. e., beyond the limits of individual fire, to have a body of mediocre shots rather than highly expert marksmen, but this contention would be fallacious as the distance to the object, whether calculated or ascertained by a range-finder, is not necessarily the elevation required to be put on the rifle. The "error of the day" has to be ascertained and compensated for: such error of the day

being due to the height above sea level, the effects of wind, temperature and humidity.

The error of the day can only be ascertained with any degree of certainty by "ranging". The more concentrated your fire, the greater the facilities for quick and accurate ranging, so as to straddle the Target. If your fire becomes very dispersed either in breadth or depth, due to the inefficiency of your shooters, erroneous conclusions will be drawn, or any definite calculation may be impossible. This matter will be referred to later on.

There are several methods employed in ascertaining the distance to the objective.

- (1) Judging the distance by eye.
- (2) Measuring the distance on a map or with a range-finder to prominent objects in the vicinity of the objective and the firers, and so obtaining key ranges.

Then during an advance the distance of the target and the firers can be estimated from the nearest key range.

- (3) Ascertaining the range to the objective itself by range-finders.
- (4) Judging distance by sound.

The errors that may be expected from the employment of these several methods are as follows:—

- (1) 15%
- (2) 10%
- (3) Mekometer 5%, one man Rangefinder 2% to 3%
- (4) 10-15%.

(1) Provided men possess normal eyesight, the ability to judge distance with reasonable accuracy is only a question of constant practice and training. Such training should be carried out in all positions i., e., standing, kneeling, or lying down, in al

weathers and under varied conditions of terrain, light and atmosphere. The Ladakh or Kashmiri shikari, so wonderful in picking up and estimating the distance to the quarry would be lost in the plains of India. The Surrey recruit would be hopeless in the Yorkshire moors, the Fenland soldiers would be bewildered in the Highlands of Scotland or the mountains of Wales. A sportsman who was skilful at picking up game and judging his distance in a waterless country would be totally at sea, in more senses than one, if transplanted to a lake district, a country intersected by rivers or in a boat on the ocean.

The method of inculcating this knowledge is laid down in the Text Books, where its importance is fully recognised. Soldiers are trained up to 800 yards and their error should not exceed from 10-15%; Officers and N. C. Os, (who would be responsible for the delivery of controlled fire) up to 1400 yards, and however good a shot they may be, they will be classified as second class shots if their errors of judging distances between 200-1400 yards exceeds 20%.

This judging distance by eye is all the more important as it is frequently the only method available. It is seldom possible to employ a two-man range finder within 1400 yards of the enemy during an action.

2. It is unnecessary to further accentuate the desirability of ascertaining, on the defence, the range to prominent objects or features over which the enemy will pass or hold as fire positions in the attack or prior to launching on attack, of ascertaining the range to the enemy's position from the point from which fire will be opened and from subsequent fire positions that will be occupied in the advance.

Every endeavour should be made to take these ranges and by means of range cards disseminate the knowledge to all concerned.



## ***Infantry Range Finders & Range Finding*** 317

In these range cards the particulars would be noted somewhat as follows:—

### ***Attack Range Card.***

#### ***Range Card Attack. I. A. F. G. 1102.***

0	...	Dipcot Down	...	...	3000
800	...	Smylly's Farm	...	...	2200
900	...	Fir Spinney	...	...	2100
1050	...	Windy Cap	...	...	1950
1300	...	Horley Road	...	...	1700
1650	...	Claycart Hill	...	...	1350
2350	...	Bewly Burn	...	...	650
2500	...	One Tree Hill	..	...	500
3000	...	Scroggs Bottom	...	...	0

**RANGES TAKEN WITH.**

**BARR AND STROUD INFANTRY RANGE FINDER.**

**John Barker Corpl. Range Taker.**

The attackers assembling in Scroggs Bottom would pass over or in the vicinity of the several prominent features noted on the range card and would know the range to the enemies position from that fire position.

### 318 **Infantry Range Finders & Range Finding.**

On the Defence the range card would read as follows:—

O. R. if Range Cards were not available.

Ranges from Upland Meadow. Facing N. W.

(Notice board-Trespassers will be prosecuted.)

	Broken gate in	...	200
	post and rail fence.	...	
	Lone Pine Hill	...	450
	Windmill Hill	...	600
	Browns Copse	...	750
Ranges taken	Chalk Pit	...	900
bymekometer	Beacon Down	...	1000
	Althorpe Church	...	1200
by	Manor Farm	...	1450
T. Barker Capt.	Hangmans Hill	...	1600
W. Smith.		...	

As the enemy passed these features in the attack the defenders would be able to set their sights to the correct distances.

If time permits range cards can be elaborated by drawing lines of sight from a well defined point to the various objectives and printing the ranges and objectives along these line of sight. But as a rule the simpler the charts are the truer they would serve their purpose.

The two range Charts (plate 2) are based on the data mentioned above—

#### 3. Range Finders—

There are three principles which Range finders employ to ascertain the range.

- (1) The angle subtended by an object of a known height.
- (2) The solution of the range finding Triangle.
- (3) Stereoscopy.

(1) The earliest form of range finder, if it can be so termed, was a slotted foresight fixed in a carbine. When the figure of a man just fitted this foresight, he was 200 yards away and considered "within range".

The same principle was employed in a system of sights invented by an officer of the New Zealand forces some fifteen years

ago, in which the height of a man was employed as a foresight and when this exactly fitted into steps cut in the backsight, the correct sighting was ascertained.

Messrs Steward the opticians produced a telescope with steps engraved on the glass shewing the height of a cavalry or infantry soldier at the different distances.

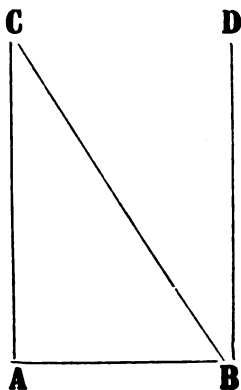
This method of judging Distance is inaccurate and impractical for the acuteness of the vision of different people is not identical and is only of comparative accuracy; the height of the enemy, even without a headdress, varies considerably, lush grass or undergrowth will conceal his legs, thus curtailing his height. Within the distances that this height could be gauged with reasonably accuracy, few chances will present themselves of an enemy remaining in view, exposing his whole body for such a length of time that he could be fitted into the correct notch in the backsight or the graticules in a telescope—it is noted that using the foresight on the Mark III. Short Rifle—the blade covers a full length figure at 400 yards and the diameter of bore at 300 yards. Such adjuncts to judging distance cannot be taken seriously.

(2) Solution of the range finding Triangle. This is the problem that is solved in different ways in the majority of range finders.

If the length of one side and the value of any two angles of a triangle are known, the length of the other two sides can be calculated—see Figure 3.

**THE RANGE FINDING TRIANGLE**

**FIG. 3.**



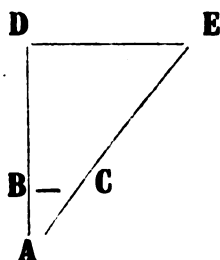
In the Triangle A. B. C. if the base A. B. is known and the angles C. A. B., A. C. B. can be measured, then the length of the sides C. A., C. B. can be calculated.

If the angle C. A. B. is a right angle and constant then the angle A. C. B. alone need be measured.

(3) One of the earliest rangefinders in the British service was the Stadiometer used in the instruction of recruits when putting out "points" i. e. men for instruction in judging distances see Figure 3-A.

### STADIOMETER

FIG. 3 A.



It consisted of a bar of wood B. A. with a cross piece B. C. and two supports at A and B., on the cross piece B. C. were two notches 2 inches and 4 inches from B. respectively. On the Bar B. A. distances were graduated—up to 400 yards.

Two fatigue men were placed at D. and C. the fatigue man at D. was supplied with a cross staff, a 40 yards chain and flag. He aligned the sights of his cross staff on a flag raised at B. and by means of the other pair of sights and the chain placed E at forty yards distance at right angles to the line A. B. D. A sliding sight was moved along the bar A. B. obtaining the line of sight X. C. E. Since in similar triangles similar sides are proportional.

B. C. : D. E. :: A. B. : A. D. in the case where D. A. = 400 yards if D. A. exceeded 400 yards the 2 inch notch was used and the readings on A. B. doubled.

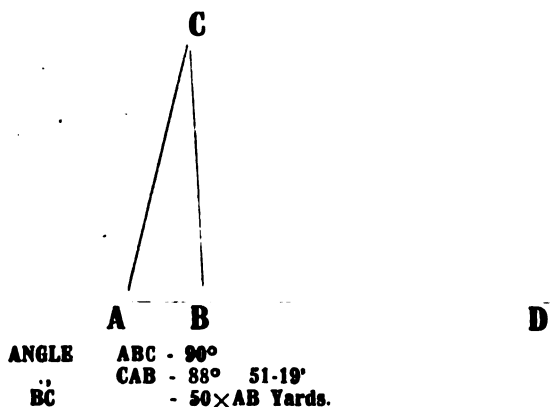
It is evident that for service purposes such an instrument was of little utility as it necessitated a fatigue party being despatched into the enemies country, but it might have been useful

in a fort or laager when preparing the same for defence—though the same results could have been obtained by triangulation.

(4) The weldon Range Finder-

This instrument consisted of three prisms set in a watch shaped metal case—See Figure 4.

**PRINCIPLE OF WELDON RANGE FINDER FIG. 4.**



If it was desired to obtain the range of an object C. from B. the range taker looked into the prism marked 90° and choosing some well defined object D. moved his position until the reflection of C. seen in the prism and D seen by direct vision over the prism coincided. He then placed a picket at B. between his feet. He then retired along the line A. B. dressing on B. and C. until the reflection of the point C. in the second prism coincided with the points B. D. Another picket was placed in the ground and the distance between A. and B. was paced or measured with a specially marked tape; every yard in A. B. equalled 50 yards in B. C.

The advantage of this instrument was its portability and the fact that its employment only needed the services of one man; its disadvantages were that it necessitated movement, that the results were apt to be inaccurate if the prisms were unduly tilted, when the points C. B. D. were at considerable different elevations and that it required definite and well defined points at C. and D. A third prism was fitted for use when A. B. was unduly long or impossible to be measured owing to obstacles; by means of this prism a base  $\frac{1}{200}$  th of the range was measured.

(5) The Watkin Range Finder was not in general use in the Infantry. The Carbiniers used it for some years.

(6) The Mekometer—

This instrument is practically the Watkin Range Finder cut in two, it solves the range finding triangle, Figure 3 in the following way.

The base A. B. is fixed at 25yards, being measured by a hemp cord, each end being held by one of the range takers, the angle C. A. B. is a right angle the angle B. C. A. is measured by measuring the angle D. B. C. A. C. B.

The Range Finder is so well known that no description of the instrument or method of taking the range is considered necessary.

Its advantages compared to the Weldon Range Finder are (1) Celerity in taking the range (2) Ability to take the range to a moving Target. Its disabilities are (1) that it requires two range takers, thus introducing a double personal error (2) that a prominent object must be available to range on, that such object must be visible from both ends of the base, (3) that care must be taken to keep the cord tightly stretched, (4) that the cord is apt to catch in inequalities of the ground or bushes, (5) should the instrument get out of order it could not be adjusted under regimental arrangements.

(7) Marindin Range Finder.

This range finder solves the range finding triangle in a similar manner to the Mekometer.

See Figure 5.

With the drum set to infinity the end prisms receive rays that are parallel, see A. C. B. D. By revolving the drum the position of the right prism is changed. When the true range is recorded, it will receive centrally the rays B. C. these rays include the object to be ranged on—in other words the angle D. B. C. is measured and recorded on the drum in yards.

The method of ascertaining, if a true coincidence is obtained, is shown in Figure 5.

The great advantages of the one man range finder are that no movement is required on the part of the range taker and no prominent object is necessary to range on—further we have the personal error of one man only to deal with, halving and zero errors can be adjusted regimentally in the field, provided the windows at the ends of the instrument are not masked the range taker can be behind cover. So long as we can obtain an object, be it horizontal, vertical or inclined of sufficient length that we can half it or cut it, ranges can be taken with facility and accuracy the instruments being held at right angles to the line of the object. If we take the range to a vertical object such as a poplar tree, flagstaff, side of a house, church spire we hold the instrument horizontal, if we take a horizontal line such as a crest or wave of the ground, we hold the instrument vertical. If it is desired to range on the slope of a hill or leaning tower or tree we hold the instrument at a slope so that it is at right angles to the line of slope or inclination of the tower or tree.

By means of Astigmatic glasses ranges can be taken by night, on lamps or lights and by day on the sun's reflection from glass or mirrors.

These glasses draw out the point of light into a thin vertical line.

It is possible to range on small objects which cannot be halved or on irregular objects as the tops of the trees in a dense wood; by revolving the instrument in its bearings up or down so that the object is first seen in the one and then in the other field

of view and turning the drum until the object appears in the same vertical plane in both halves.

It can be understood that an instrument capable of reading up to some 8000 yards with a permissible error of 5 %, having a short base, must of necessity be of a delicate nature, and it follows that it should be treated as an optical instrument.

(8) Barr & Stroud Infantry Range Finder-

See Figure 6-

Like the Marindin Range Finder this solves the range finding triangle by measuring the angle D. B. C. but instead of revolving the right prism, the angle D B C is measured by moving a deflecting prism (F), to which the range scale is attached, along the right half of the range finder.

As will be seen in Figure 6. the object appears inverted in the top half-at first this is apt to confuse the range taker, but this inconvenience is soon overcome by practice. The inversion of the image has the advantage that irregular objects such as the serrated tops of trees in a forest, rocks on a ridge, etc., can be easily superimposed. The range can be read off the scale with the right eye while the left eye marks the coincidence.

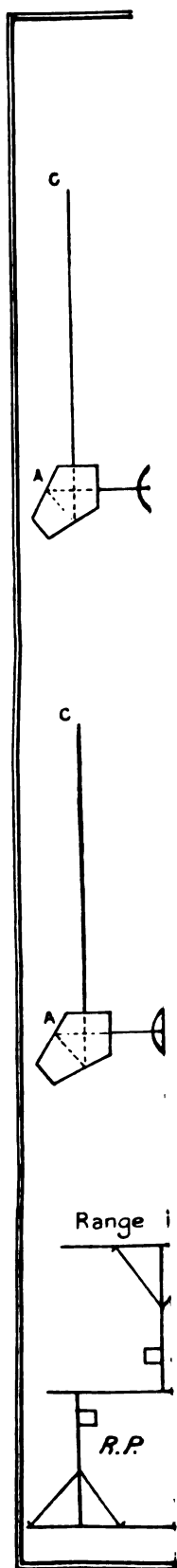
(9) Zeiss Stereoscopic Range Finder.

On looking into this range finder lines are seen with ranges marked on them. These lines are in the form of an angle. The object to be ranged on is superimposed over these lines and the drum is revolved until the object appears to lie between two of the numbers as seen in stereoscopic vision. This gives the range of the object.

The disadvantages of this principle are (1) that all men cannot see stereoscopically, (2) that the focal distance must be altered for each observer, (3) that it is very trying to the eyesight. (4) that in order to see the object stereoscopically it is very desirable that the same be well defined with a back ground of a different colour at some distance beyond the object.

A flagstaff against the sky or sea is easily ranged on, but the edge of a copse or a thatched cottage on the side of a hill presents great difficulties.

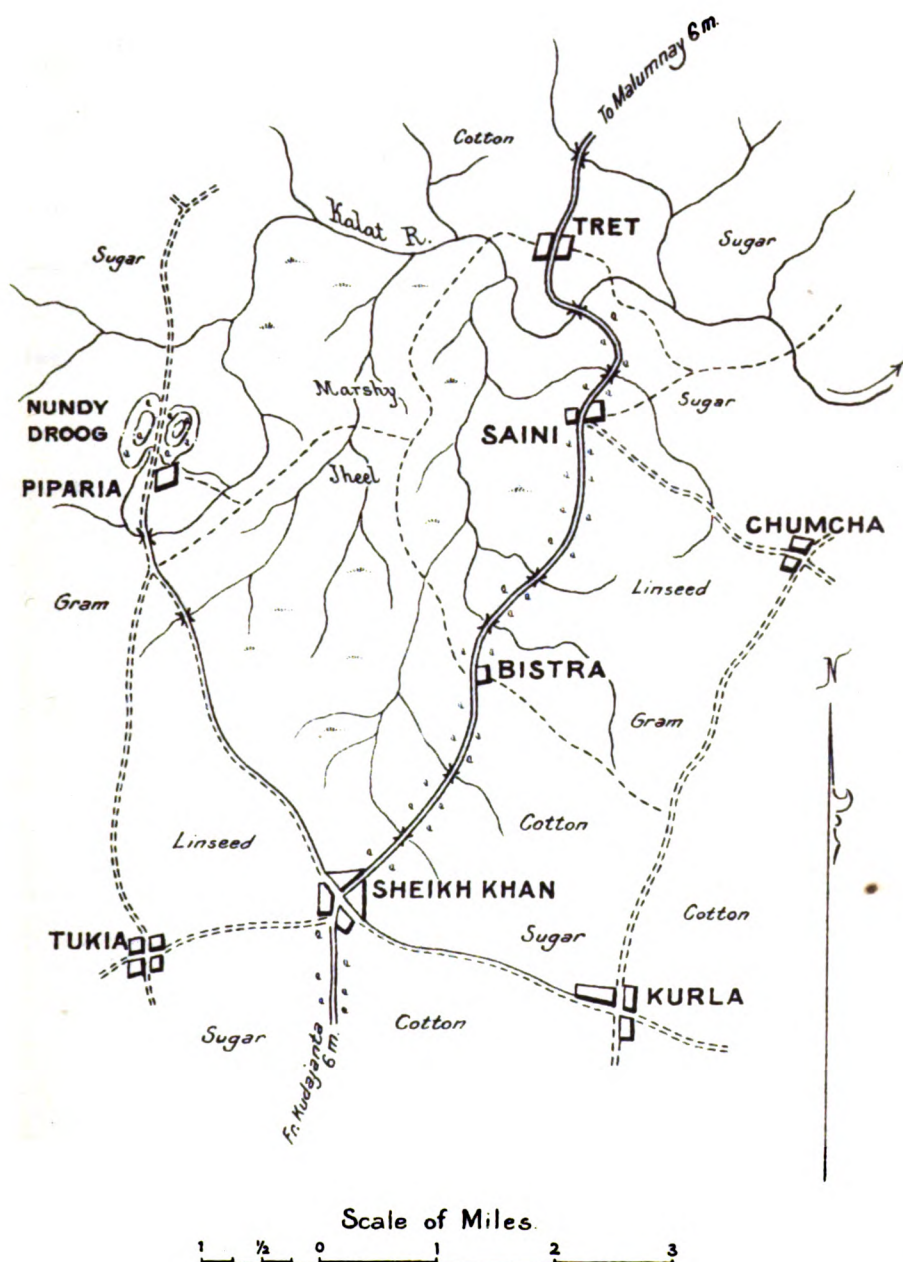






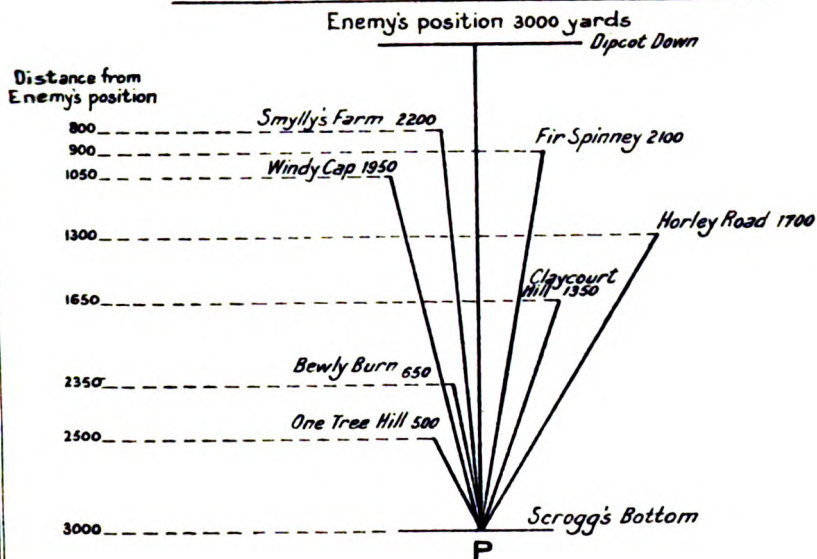
# SKETCH

Shewing Northern portion of Major Coldwell's  
**RECONNAISSANCE ZONE.**

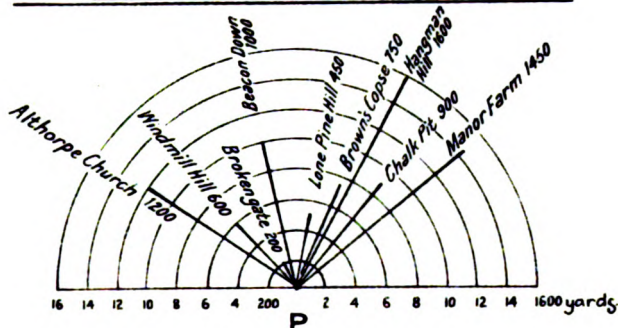




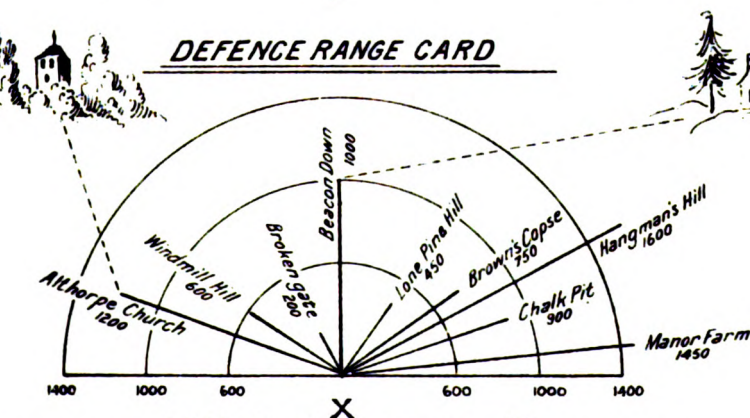
# ATTACK RANGE CHART



## DEFENCE RANGE CHART



## DEFENCE RANGE CARD



RANGES FROM { Notice board - Trespassers will be prosecuted, Upland Meadow. } FACING N.W.

Now taken. Mekometer.

J. Barker Corpl. T. Sanderson Corpl.  
Range Takers.



*Judging Distance by sound.*

Since sound travels at the rate of 1100 feet per second or 1100 yards in 3 seconds, we can, by accustoming ourselves to count at this cadence, i. e., 11 beats in 3 seconds, ascertain the distance to the firer by counting the time between seeing the flash and hearing the report. In the old days of volley firing and black powder, accurate results could be obtained, particularly at night. Similarly field guns firing at reasonable intervals could be ranged on.

Independent fire and rapid fire by Q, F. guns naturally renders judging distance by sound impossible.

It is feared that the art of judging distances is not sufficiently practised and the extreme importance of ascertaining the correct distance not appreciated, but it is hoped that a case has been made out and that its vital necessity may be recognised as a means of preventing waste of ammunition and enabling effective fire to be brought to the enemy.

Mere excellence in marksmanship will not suffice as the following instance will show Col. Barlow offered some very valuable prizes at Bisley some years ago for shooting on "Service" lines combined with excellence in judging distance. The competition drew many competitors possessing the highest shooting qualities as gauged by shooting at a fixed Bulls eye target. Whilst the shooting at the "Service" targets in snap shooting, rapid, skirmishing and deliberate practices was in many instances effective, the inability to judge distance on service objectives and to pick up those objectives was pronounced, such inability would have discounted to a great extent the superlative excellence of the marksmen at a Bullseye Target at a known range.

*Ranging.*

As has been previously mentioned the distance to the object whether ascertained by one or other of the above methods is not necessarily the elevation required to be placed on the backsight of the rifle or the Target sight of the machine gun. This can only be ascertained (1) Theoretically by calculation.

- (1) Calculation of the error of the day.
- (2) Practically, by observation of fire.

The main factors that cause an alteration for the sighting required are:—

(a) Firing up and down hill. Gentle slopes can be ignored but allowance should be made for the steep slopes as follows.

20° of slope	...	...	deduct $\frac{1}{8}$ th of the range.
40°	...	...	$\frac{1}{4}$
60°	...	...	$\frac{1}{2}$

(b) Atmospheric conditions from an infantry soldiers point of view, owing to the comparatively short distances at which he is called upon to fire, the heights of the Barometer and Thermometer cannot be said to materially affect the normal elevation required (see Musketry Regulation Section 28 and 29), at the same time mark VII Ammunition is affected by heat to greater extent than mark VI.

(c) Head and rear winds. For strong winds increase or reduce elevation by 50 at 1000 yds and 100 at 1500.

**(2) *Observation of fire.***

This is the most practical and reliable method of finding the error of the day or the correct elevation to be placed on the rifle or machine gun, but it is only possible under favourable conditions.

(1) The approximate distance must be ascertained as accurately as possible in order to save time and prevent waste of ammunition.

(2) The firers must be skilled shots so as to obtain reliable data as to the position of the effective breadth zone.

(3) The ground in the vicinity of the Target must be of a nature to show up the strike of the bullets.

A sufficient volume of fire must be available.

See musketry Regulations Section 69.

H. P. DE LA BERE,

Lt. Colonel.



# **THE ORIGIN AND EARLY HISTORY**

## **OF THE Mers of Merwara**

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By

Lieutenant Colonel John Hoskyn, C. B. E., D. S. O.  
44th Merwara Infantry.

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The Mers of Merwara are the Highlanders of Rajputana. Inhabiting a narrow strip of hilly country in the heart of that province, they have always maintained their independence against the attacks of the powerful Rajput States by which they are surrounded; and a free and manly carriage, the hereditary badge of liberty, distinguishes them from the neighbouring tribes of bondsmen and tillers of the soil. For centuries before the coming of the British, the Mers not only held their own in the rocky fastnesses of the Aravali Hills, but made active reprisals on the enemies who sought to subdue them.

Issuing from their narrow glens parties of these lean caterans would speed North and East and West; avoiding beaten roads and travelling by desert bye paths; one or two of them mounted on small ponies, and leading other ponies with capacious sacks for the receipt of booty, but most of them on foot, each man armed with a spear, a leather shield on his shoulder, and a short curved sword slung at his side; thus they held on their way to some distant town or village, drowsing in the stagnant security of the plains; where, that night, would be heard the shout of the startled watchmen, quickly stifled; the cries of terrified bunnias, dragged from their beds and persuaded, without loss of words to produce their hoards; the shrieks of women, and the hoarse cries of the plunderers ranging swiftly through the streets. The city of Ajmer, lying amongst their own hills, was a milch-cow to these wiry little marauders. They knew the secret paths by which they could swarm like bees into the Fort of Taragarh, and they took toll of the marches of Bundi Shahpura, Jodhpur and Udaipur up to the very walls of those cities.

Naturally, the proud Rajput States looked on these reivers with contempt, considerably tempered by exasperation. The small chiefs and Thakurs whose lands lay at the foot of the hills paid blackmail to the hillmen, and even sought to gain their friendship by giving them assistance and shelter when they needed it; but the larger states scorned such terms as these. Jaipur, Jodhpur and Udaipur each claimed the over-lordship over different portions of the Mer country; and several expeditions were sent by the Princes of those States to punish the "Crows," as they called the hillmen, and destroy their nests in the glens. But the Rajput warrior, brave as a lion in a galloping, sword and lance encounter in the open was never a hill-fighter; his horse was useless to him in the narrow, rocky ravines and thick scrub-jungle of the mountains his lance could not reach the active enemies who swarmed on the hill-sides shooting arrows, hurling down boulders and charging home, sword in hand, when they saw an opening. The Rajput Armies were forced to retire; the "Crows", squatting on the ridges above them, croaked cheerfully at the retreating cavalcades, and not many nights passed before the villages of the plains were again paying the penalty of their prince's failure.

It was not until about a hundred years ago that these wild mountaineers were subdued, by a British force; and in due time a British Officer, a subaltern in the Bengal Artillery, Dixon by name came to rule over them. How this Gunner subaltern devoted himself to the service of this "new-caught sullen people"; how he exercised the "devil" in them, and taught the "child" that remained the elementary lessons of civilisation and discipline; how with firm hand and kindly heart he won their devotion, once for all, to the British; how he fought for them against political intrigue, when the Rajput Princes, seeing them tamed and, as they thought, broken, revived their old claims to their land; how he lived among them, and how, finally, he died among them, having seen the fruit of his work. when the Mers stood firm

as a rock in the flood of the mutiny of 1857, and a loyal Mer Regiment marched into Ajmer, and defied the mutineers of Nasirabad to lower the British Flag in the chief city of Rajputana, all this is written, no mean page of it, in the Book of the Chronicles of the British Empire. But our business at present lies not with the modern history of the Mers, strangely interesting though it be but with their origin and early history.

The Mers themselves have no historical records; all connection with the past, written or oral, except what exists in names and customs, was effaced during the centuries of anarchy which preceded the British occupation, and when the tribe returned once more to the paths of civilization they found it necessary to give an account of themselves which, in that country of exclusive castes and prehistoric genealogies would fix the conditions of social intercourse with their neighbours. The hereditary Bards of the tribe rose to the occasion and produced a legend that the tribe was descended from a Chohan prince, a grandson of Prithi Raj the last king of Ajmer. The legend says that this prince carried off a Mina girl of Bundi, and married her, believing that she was a Rajputni. When this mistake was discovered, she was expelled from her husband's home with her two sons Anhel and Anup, and wandered into the Aravali hills, where she found a refuge; and her sons became ancestors respectively of the Chitas and Barars, the two chief clans of the Mers. But the legend takes no account of the facts that the stock names of the Naks or branches of the Mers are, not Chohan alone, but Powar, Gehlot and Pariar as well; and if any further proof is needed of the incorrectness, or at any rate incompleteness of the legend of the Bards it is contained in the Bardic chronicles of the Chohans themselves, which mention the Mers as a powerful fighting tribe long before the times of Prithi Raj.

The accounts given by modern historians of the origin of the Mers do not as a rule go much beyond this legend of the Bards.

Colonel Dixon in his sketch of Merwara accepts the legend, which he gives at great length, and traces the genealogy downwards through various mythical descendents of Anhel and Anup; and this genealogy, on the strength of Dixon's acceptance of it, is today implicitly believed in by the Mers themselves.

Colonel Tod in the "Annals of Rajasthan" derives the name of the tribe from *meru* a hill; and states, in one place, that the Mers are a branch of the Mina tribe, and in another, that they are descended from the Bhatties of Jesulmer. A Mohamedan historian of Ajmer mentions a vague legend from the Bardic chronicles of an ancient Mer Kingdom of Tanore, in Merwar, from which the Mers were driven by the Rathors when the latter took possession of the country. A native Christian Missionary named Manawar Khan, who lived for 40 years in Todgarh carrying on Missionary work among the Mers, and who therefore should have known better, published some 20 years ago a small "History of the Mers of Merwara" in Hindi, in which he says that they are aborigines like the Bhils and Minas, from whom they are distinguished by the fact that they have made more progress, socially, under the British, than those tribes have done under native rule. This theory unfortunately did not commend itself to the Mers, who solemnly burnt the book in a public assembly of the representatives of the tribe and called the reverend author names which I should be sorry to repeat. Finally, Sir William Hunter in the "Imperial Gazetteer of India" dismisses the ancestors of the Mers with the remark that they were half-naked aborigines, careless of agriculture, and engaged in constant plundering expeditions into the surrounding states. Up to 1818" he says the history of Merwara is a blank." It is necessary to go further afield to find the clue which connects this tribe of "half naked aborigines" with an ancestry at least as ancient and as renowned as that of any other race in India.

[The principal authorities on which I have based the following account are:- Elliott's History of India, Volume 1, Professor Dowson's notes to the same; Pandit Bhagvanlal's "Early History of Gujrat", and the account of the Gujars given in Volume IX of

the Bombay Gazetteer. The Rajput annals of Rajputana and Kathiawar also furnish several references to the Mers, which complete and elucidate these accounts, and specially throw light on the subject of the connection of the Mers with the Rajputs].

At some period during the 5th century of the Christian era, when the Persian empire of the Sassanides was sinking to ruin, and the great hordes of Central Asia were in a state of volcanic flux and turmoil, an upheaval took place in the regions of Northern Persia, on the confines of the ancient kingdoms of Georgia and Media which resulted in a huge tidal wave of humanity being propelled Eastwards and Southwards toward the Frontiers of India. This Army or horde (urdu) was composed mainly of two tribes, the Gurjars from Gurjistan (Georgia) and the Mihiras from Mihiristan, the land of the Sun, Media. Through the passes of the mountains this flood poured into the Punjab and its further progress to the South-East being stemmed by the strength of the Hindu Kingdom of the Gupta dynasty established there, it followed the line of least resistance, turned South by the Indus valley, and spread over the deserts of Sind and Western Rajputana. In Sind it encountered the opposition of the great tribe of Jats—themselves the jetsam of a former horde of Getae or Goths who had flooded the country in the same way some three centuries earlier, who were now settled on both sides of the river. The newcomers moved down the Eastern bank, driving the Jats across the river; and leaving a large colony of Mihiras to occupy the valley, they passed on into Kathiawar. Here the Mihiras appear to have remained, while the Gurjars moved on and settled in the adjacent province, now known as Gujarat. The name of the former tribe is variously written as Maitraka, Mihira, Medor Mand; this varied nomenclature has led to some confusion, and historians have not always recognised the tribe under the various names by which they are mentioned; but the arguments of Pandit Bhagvan-  
\* "Early history of Lal Indrajī have placed it beyond reasonable  
Gujrat" Bo. Gazet- doubt that the modern Mhairs or Mers or Mer-  
teer vol. 1 part 1 p. wara and Kathiawar are identical with th  
135.  
Maitrakas or Mihiras of the great migration.

The period of the arrival of the horde of Mers and Gujars (to give them at once the names by which they are now known) was a critical one in the history of Hinduism. The ancient religion of the Brahmins had suffered from centuries of corruption, and had fallen into disrepute; the doctrines of the reformer Gautama, backed by the authority of the emperor Asoka, had swept the country from North to South. But with the fall of the Maurya empire, and the elevation of the Gupta dynasty, the Brahmins saw the opportunity of recovering their lost supremacy. In the civilised regions of the North and East they were successful; but in the West they encountered the vigorous opposition of the sect of the Jains, who had established themselves in great strength in the Western Kingdoms. By the active proselytism of the Jains on the one side, and the more carnal arguments of slings and arrows employed by the aboriginal Bhils on the other, the ranks of the Rajputs Kshatriyas, on whom the Brahmins relied to defend their temporal power, were getting perilously thinned; and the opportunity of recruiting these ranks, by admitting the warlike strangers from the North to the privileges and responsibilities of the Kshatriya caste, was too obvious to be missed by the astute Brahmin.

There was nothing revolutionary in this proceeding; many times in the history of Hinduism the same expedient has been

\**Bo. Gazetteer Vol IX* resorted to.\* According to the strict law of Manu the higher caste of Hindus  
Part I pp. 434-452.

cannot be entered by foreigners or men of lower caste except by the drastic process of re-birth. But has any human law-maker yet succeeded in defeating the ingenuity of his disciples? The acumen of the Pundits was not unequal to the twisting of this rule in accordance with the dictates of policy or of necessity. First of all, there was the discreet fiction, that the warlike neighbours were descendants of an original Kshatriya stock, who might regain their ancestral caste rights by returning to a devout observance of their religious duties, more especially those which enjoined the protection of Brahmins.

Then again, according to Manu, a King is composed of particles drawn from the essence of the gods, and this applies not only to Hindu Kings, but to all Kings. The ruler even of a tribe of foreign invaders could therefore claim to be an emanation of divinity, and could hardly be denied the right, should he claim it, to rank as a Brahmin or at the least a Kshatriya; and once admitted in his case, this right might quite logically be extended to his clan, whose origin was the same as his own. Under successive applications the letter of the law was finally broadened into the general rule, that "who acts as a Kshatriya, him you must con-

\* Willford in *Asiatic Researches* X, 91

sider a Kshatriya."\* Two well known examples of the application of this rule in Western India, besides the Mers and

Gujars, are the Chitpavan Brahmins, who are said to be descended from a crew of foreigners shipwrecked on the Koukan coast; and the chiefs of the old Mahratta families, who have been admitted to the Kshatriya caste, although the Brahmins of Northern India still believe them to be of Persian origin.

But was there anything to induce the chiefs of the invading tribes to put themselves and their followers beneath the Brahmin yoke? Admission to the exclusive and jealously guarded caste of king-born warriors, over which hung the glamour of Rajput tradition and chivalry, was undoubtedly an inducement to the warlike barbarians; and the subtle Brahmin well knew how to turn to account the common weakness of human nature, to desire most that which is most difficult to attain, without regard to its intrinsic value. But there was another powerful bond which attached the Mers to the Brahmin cause and alienated them from their opponents. The Mers brought with them from Persia the worship of fire and of the Sun.\* *Mihir* in the ancient

\*See below for an account of the connection of the Magha Brahmins with the Magi.

language of Persia, and *Mitra*, in Sanskrit, are names of the sun; and the names *Maitraka* and *Mihira* by which the Mers are known in the Hindu accounts of the great invasion, as well as the title *Mihirakula*,

or child of the Sun, of one of their principal chieftains, seem to connect this tribe in a particular manner with Sun-worship. They would therefore be naturally attracted to the side of the Brahmins, who were also Fire and Sun-worshippers, in opposition to the Jains and Buddhists, who had not only abandoned this worship themselves but had forbidden its

\* Gladwin's *Ain-i* continuance in the territories where they  
*Akbari* 11 43 held sway.\*

In order to lend especial emphasis and *eclat* to the admission of this powerful reinforcement to the ranks of their defenders, the Brahmins determined to signalise it by performing the sacred rite of Initiation by Fire. This rite would appeal especially to the newcomers as a sacrament of their own religion, and would emphasise their antagonism to the Jains who had tried to stamp out fire-worship. Apparently it was reserved for the most solemn occasions only, and was seldom employed except for the initiation of Brahmins themselves; something resembling it is said to have been employed at the initiation of the Chitpavan Brahmins

\* "Chitpavan" signifies above referred to.\* Actual details of the  
 "pyre pure" rite are not known. Legend describes the scene on the sacred mountain of Abu, where the gods assembled in open Lodge round the great Agni-kund or Fire-pit which is still to be seen there. First Indra made an image of grass, sprinkled it with the water of life and threw it into the fire-fountain, muttering the Charm of Life slowly from the flame arose a mace-bearing figure shouting "*Mar Mar*". He was called the Parmar or Foe-slayer. Next Brahma framed an image of his own essence and threw it into the fire-pit, repeating the life-charm. A figure rose with the sacred thread round his neck, a sword in one hand and a Veda in the other. He was called Chalukya or Solanki. The third champion was the Pariar who was created by Rudra and rose from the flame black and ill-favoured, bearing a bow. Last of all came Vishnu's image, the four-armed Chohan.



According to the legend, the Parmar or Powar received Dhar and Ujjain as his heritage, to the Solanki was assigned Anhilpura, to the Pariar the desert regions West of Abu, and the North was given to the Chohan. Of the thirty six royal races of Rajputs it is said the fire-born are the greatest, the rest were born of women, while these owe their origin to the gods

\* *Tod, Annals* 11 407 themselves.\*

There can be very little doubt that these four fire-born races were originally Mers and Gujars. The fire-born races date their

\* *Be. Gazetteer Vol X* origin from the fifth century.\* Unless Part I p. 486

we are prepared to accept the legend of their miraculous creation we must conclude that they originated from a non-Hindu warrior race. The fact that their appearance synchronised closely with the arrival in Rajputana of the conquering tribes of fire-worshipping Mers and Gujars, points at once to a probable source from which this new accession to the fighting force of the Kshatriyas was drawn.

In an old Rajput inscription, a prince of the Pariar race is

\* *Prachinalakh-mala* referred to as a Gujar.\* The principal 153-54 division of the Gujars in the Punjab

\* *Gujarat Gazetteer* District bears the name of Chohan.\* The 50-51 Solanki Oswals, the leading class of

Western Indian Jains, are Gujars. In poems Bhim Solanki, the

\* *Ras Mala* 1 222 great king of Anhilvada is called the Gujar.\*

The nature of the connection between the Mers and the Gujars is not quite clear, but in view of their common country, common religion and customs and their combined invasion of India it is fair to assume that it was very close. It has been suggested that the Mers were not regarded as a separate tribe, but as a ruling class of the Gujars; the later still refer to their head-men as "Mir." In any case the fact that Mer kingdoms were established in the countries first over-run by the invaders, as Kashmir, the Indus valley, and Kathiawar, while the Gujars

\* The only semi-independent Gurjara Kingdom of which we have records was that at Nandod in Southern Guzerat, but the Kings of Nandod acknowledged the Mer Kings of Vallabhipura as their overlords. *Bo. Gazetteer Vol 1 part 1 p.113*

should have been excluded. Moreover of the four stock-names of

\* These names are probably adaptation of a tribal stock-names of the Mers and Gujars, which have been given Indian meanings. *Bo. Gazetteer vol IX part 1 p. 483 Tods Annals 2nd Edition 11 407*

The Gehlots for instance are probably identical with the Getae mentioned by Herodotus as a principal tribe of Medes (*Encyc. Brittanica Art "Media"*)

either went further afield or remained in the Mer kingdoms in a subordinate position, seems to show that of the two tribes the Mers predominated in power and influence. It is in the last degree unlikely therefore that if Gujars were admitted to the caste of Kshatriyas, Mers

the Mers given above, three correspond with names of the fire-born tribes. The fourth stock-names, Gehlot, refers to a different origin, which will presently be explained.\* I conclude therefore, that of the four fire-born tribes of Rajputs, three viz the Chohan, Pariar and Parmar were composed of both Mers and Gujars; the fourth Solanki, may have been composed of Gujars alone.

A hundred years ago, the Bards of the Mers, greatly daring, ventured to ascribe the origin of their race to the debased offspring of a Chohan prince. A strain of Chohan blood, even though blended with disgrace, was the highest genealogical pinnacle to which they could aspire, and even this claim was not admitted without derision by their neighbours. The strange truth appears to be, that instead of the Mers being descended from the Chohans, the Chohans themselves are descendants of the ancient nation of Mers.

Besides those who were specially distinguished by the fire-initiation, other clans of the invaders attained the dignity of inclusion among the Rajput royal races without undergoing this ordeal. Probably most of the Rajut Chiefs of Kathiawar are descended from the Mer conquerors of that province. The Jethva chiefs

of Porbander for instance, who were formerly powerful rulers, are almost certainly of the \*Mer tribe. They are still called Mer

\* Bo, Gazetteer Vol 1 Part 1 p. 87 Kings, and the Mers of Porbandar regard them as the head of their clan. But the

most noteworthy case is that of the kings of Vallabhipur in Eastern Kathiawar. About the end of the fifth century, a chief named Bhatarka, a Mer of the Gehlot clan, conquered the city of Vallabhipur, the last stronghold in Kathiawar of the decaying Gupta monarchy, and founded a Kingdom there which included the greater part of Kathiawar, Gujerat, and Southern Rajputana. Ascion of this dynasty in A.D. 720 conquered \*Chitor from the

\* Tod's Annals 1 229-231 Mori or Maurya chief who held it. His descendants are the present ruling family

of Udaipur. This origin of the Sessodies perhaps accounts for the curious blend of Sun-worship with orthodox Hinduism which

\* Bo. Gazetteer Vol IX part 1 p. 102. Tod's Annals 1 235. exists in Udaipur; and it throws an interesting light on the claim of the

Gladwin's Ain-i-Akbari 1181. Maharanas to a descent from Nushirwan, the last great Sassanian emperor of \*Persia.

Not only were the warriors of the Mers admitted to the Kashtriya caste, but their priests were recognised as Brahmins. The horde of fighting men was accompanied by a hereditary tribe of priests, called "Maghs" who were under the special favour of the great conquerer \* Mihirakula. In India the Maghs

\* Troyer's Rajatarangini 1307-309 seem in general to have worshipped a combination of the Sun and Siva under the

title Mihir-Eshwar (Sun god). This was the established religion in the Vallabhi kingdom of Bhatarka and his successors.

But a pure form of sun-worship was maintained at Multan,

\* Herodotus mentions the Magoi (Magi) as the hereditary priests of the Medes. Modern (post Islamic) Persian poetry is full of references to the "Maghs" the priests of the ancient religion.

O Reinand's Memoire Sur l. Inde 99-39

Muir's Sanskrit Texts 1 497

Duwarka, Somnath and other holy places, probably by the priests of the sect.\* The descendants of the Maghs under the name of Magha Brahmins now form one of the leading priestly classes of South O Marwar.

Niether the date nor the circumstances of the fall of Vallabhipura are very

clearly known. The most probable account is that preserved by the Portuguese traveller Alberuni, who says that the Arab chief of Mansura, in the Indus valley, sent a naval expedition against Vallabhipura. In a night attack the king was killed and his people and town were destroyed. Alberuni gives no date to this event; but it must have occurred between A. D.

\* *Bo. Gazetteer Vol 1* 750 \*and 770. After the destruction of part 1 pp.94. 95

Vallabhipura, the Mer power seems to have moved inland, probably to avoid another encounter with those terrible raiders, and to have centred in the hilly country West of Chitor, where a large tract of country received the name

\* *The modern Meywar or* of \*Medwar, the country of the Meds Udaipur. (Mers).

The subsequent history of the Gehlots of Meywar, as well as that of the main branches of the Chohans, the Powers, and the Pariars is sufficiently well known from the Annals of the Rajputs among whom these tribes were now included. But besides those who by achievement or Brahmin initiation were cleansed from the dust of their ignorance and obtained a place among the Kshatriyas, a proportion of the Mers held to their ancient faith and either from choice or from necessity remained outside the pale.

Among these were the Mers of Sind, of Kathiwar and of Merwara. In proportion as the fire-born Rajputs grew in reputation, in power, and in pride their brethren of these tribes sank into oblivion and finally after a lapse of nearly a thousand years they emerge into the light of modern history as despised barbarians, stripped of every vestige and even every memory of their former greatness. One can only darkly surmise the causes and circumstances of this strange discrimination of fate.

One curious tradition has been handed down in the tribe from ancient times and survives to this present day. According to this tradition the Kings of the Mers in ancient times were white men, and it is decreed that the Mers shall never be ruled or led by any other than a white race. I like to think that the

old Mers who did not become Kshatriyas were the sturdy independents of the tribe, who held to the legend of the white King and refused to be tempted to bow the knee to the dark-skinned races of Hindustan. With the coming of the British in the early years of the nineteenth century the riddle seemed to be solved. The Mers accepted the white officers as their destined rulers, and have followed them ever since with unswerving loyalty; it is true that their faith received a shock by the substitution of an alien Hindu District Officer for their beloved "Chhota Sahib" a few years ago, but the tradition clings, and the Mers are still inclined to hold themselves as a race apart, to regard the seething politics of India with complete unconcern, and to speak of their district as "a piece of Britain" and themselves as the peculiar servants and soldiers of the British King-Emperor.

# **TOPOGRAPHICAL AIR SURVEY.**

—O—  
By LT. COL. G. A. BRAZELEY D.S.O. R E.

## **INTRODUCTORY.**

The survey methods described in these notes are independent of air photography.

Their inception arose, and need for them was felt in Mesopotamia, where it was found impossible to satisfactorily piece together a very large number of air photos taken in strips over enemy territory far in advance of our lines and therefore beyond the reach of triangulation and where, as no reliable maps existed, there were no fixed points available to tie these scattered strips down to.

Gaps also occurred in these strips owing to the failure of the camera shutter sometimes, and this added to the difficulties of piecing the patch work together.

It had originally been suggested by the writer of these notes to the G. H. Q. that there was no reason why a means of surveying or sketching topographically from the air should not be possible, given a trained surveyor and he was instructed by G. H. Q. to experiment and see what could be done in this line.

A lull in the operations permitted of his being attached to one of the air Squadrons and in a fortnight sufficient experiments had been carried out, the requisite instruments made and a workable system evolved.

Neither the time nor the opportunity were available for teaching any of the R. A. F. Officers in the system. It was one thing for a fully trained and experienced surveyor to rapidly master the methods, quite another thing to send an officer, who was not a trained surveyor, over the enemy lines to carry these surveys out. The consequence was he was shortly afterwards called on to carry out actual surveys himself over enemy territory well in advance of our lines.

Five successful trips were made, a considerable area sketched and additional useful information collected. A reliable form of sun

compass was also evolved on the 5th trip, the ordinary form of sun dial was found to be of no practical use.

Unfortunately for the successful carrying out of exhaustive experiments the writer of these notes was shot down near Kirkuk 2nd May 1918 and taken prisoner by the Turks, during his sixth on trip. Further experiments could not be carried out till July 1919 when he was again passed as fit enough to fly once more and these were carried out at Andover in Hampshire.

*Methods Used and Experiments Carried out.*

Before any attempt can be made to carry out an "Air Survey" with any degree of accuracy means must be found to keep the sketching board constantly "oriented" *i. e.* with its true north and south lines in the plane of the meridian and to keep the board approximately level.

These fundamental principles apply both to "ground" and "air" survey.

It must be remembered an aeroplane seldom keeps a constant course, but "yaws" like a sailing vessel does under the action of the waves and wind, with the consequence that the board can never be kept truly oriented without its being constantly moved round its pivot.

Any change in direction the longitudinal axis of the aeroplane makes must be met by a corresponding change in the orientation of the sketching board.

This "orientation" can only be accomplished by aid of a magnetic compass whose dial index, after correcting for deviation etc., points to the true north or by means of sun azimuths plotted on the board as will be seen later on. Magnetic compasses will first be dealt

A pocket compass was used in each machine used in the survey. It had an amplitude of about 180 degrees at times, thus only giving a very approximate true north was.

After the compass could not be

In every case centrifugal action was set up in the liquid and rendered the compass unreliable.

An aperiodic type of compass in common use in aeroplanes was tried in a Bristol Fighter and gave fair results when flying along a perfectly straight line on the earth's surface such as an old Roman Road, maximum amplitude about  $30^\circ$  either side of the true position.

On a constantly changing course it proved quite useless; owing to inertia, and amplitude due to centrifugal action set up in the liquid, the compass would never give true direction instantly. The course according to the compass would be somewhat similar to what is shown in Fig 17; in aa.....a are a succession of positions; taken along the course by resection from the starting point and by ground speed scale compass being set with index reading true north. The course according to the compass is denoted by the firm line. The actual course taken was probably as shown in Fig 18.

To do away with one cause of centrifugal action in the liquid due to the frequent orientation of the board to which the compass had necessarily to be attached a special compass reflector was tried in Mesopotamia in conjunction with a reliable compass fixed to the side of the fuselage instead of to the sketching board, details of which are given hereafter. The apparatus proved fairly successful and further trials were to have been carried out at Andover but it could not be made before experiments were brought to a close there.

A stabilised form of compass (non-magnetic) controlled by an instrument based on the principle of the gyroscope was being experimented with under the Air Ministry; if these experiments are successful this instrument will be very useful for air survey work. The compass must keep constantly pointing to true north but the complete apparatus must not be too heavy for the aeroplane.

What eliminates the use of the pilots compass is the fact that there is no time to plot bearings with a protractor even in a machine which can fly at as low a speed as 65 miles per hour.



Also, the compass to be of any use must instantly give true magnetic bearings at all points of the compass; inertia sometimes delays the compass, and it does not settle down to the true bearing at once. This is of no use for air survey work. This method was tried in Mesopotamia and given up in favour of sun azimuths.

What were used for the experiments dealt with in this report were azimuths of the sun at  $\frac{1}{2}$  hour intervals, for the mean latitude and declination of the sun. These were plotted on the board and a long needle stuck vertically into the latter in the centre of the dial. The board was turned on its pivot till the shadow thrown by the needle coincided with the time shown by a meantime watch, the latter being corrected for difference of longitude from Greenwich and equation of time. It is always possible to keep the sketching board approximately level by means of a small circular level or by ordinary level bubbles placed at right angles to each other.

Sun azimuths cannot be used when the sun is momentarily obscured by a light cloud. To get over this a small liquid compass was fixed and let in flush with the sketching board and on the way out to the day's work the position of the magnetic north was noted when the board was oriented by means of the sun compass, and the moveable pointer shifted to coincide with the former.

Then when the sun was obscured all that was necessary was to "orient" the board by means of the compass till the sun shone out again. This method of orientation is of course liable to some error and this is indeterminate, but for the short period involved no great error in the survey work will be introduced, as long as one does not attempt to fix objects at a distance on either flank for instance.

Four patterns of sketching boards were used, three of them for area work (1) a small board 9 inches square, rounded corners with recess for compass, used in front cockpit of a Handley Page, no room for a bigger board, (2) similar board 13 inches square used in an Aero and Bristol Fighter (3) similar board

to (2) an Aperiodic type of compass being fitted to it instead of the small pocket type. (4) for route traverse work a board somewhat similar to the familiar cavalry sketching board was used, to hold a slip of paper 60 inches long and 7 inches wide. Total width over all being 13 inches square. Paper sun-dials were mounted on either side as the paper had to be constantly wound off as the work progressed. Additional sun dials can be plotted on the paper itself but great care must be taken to remove the dial each time the paper is wound off on to one of the rollers. The pin can easily be fixed firmly into the board by means of a light wooden mallet.

The following are also required i.e., Protractor, Hair-spring dividers, proportional compass and push pins.

A set of wooden speed scales on the scale to be used is required for the following speeds, i.e., 120, 115, 110, 105, 100, 95, 90, 85, 80, 75, 70,  $65\frac{1}{2}$ , 60,  $57\frac{1}{2}$ , and 55 miles per hour, 2 scales on each piece of wood: these are "ground" not "air" speed scales. These can also be used as sight rules for resection from back points or for cutting in detail to a flank.

The best scale for general use is  $\frac{1}{2}$  inch to 1 mile, easier to draw on this scale than on the  $\frac{1}{4}$  inch. Large scales require bigger boards which cannot very well be used in the machines in use.

Thin lithographic paper mounted on cloth as used for printed maps is the best for working on and can be obtained from the Ordnance Survey, Southampton. Unmounted paper gets torn by the air blast.

A supply of H. H. H. red, blue and green chalk pencils, knife and rubber should be kept. When actually at work in the air two or three lead pencils are necessary, they are apt to get wrenched out of one's hand by the rush of air, no coloured pencils can be used till the day's work is over and the observer is returning home; there is no time to handle them while actually at work.

**MACHINES USED.**

The R. E. 8 is the most suitable type of machine, speed moderate, stiff fuselage, vibration not excessive, roomy compartment aft for observer to work in, a 15 or 16 inch board could easily be used.

Turn-table seat; enables observer to turn round and face forward when necessary, sketching board can be fixed to this, seat more restful, than a fixed seat on a long flight machine, can keep in the air for 4 hours and throttle down to 65 miles per hour comfortably.

Air-cooled engine.

Wings interfere less with the view forward than in any other type of machine.

Pilot close to the observer.

Used with success in Mesopotamia by the writer of this report.

B. E. 2 E., Tried in Mesopotamia, not suitable, observer has to sit in the forward compartment, poor field of view.

Handley Page: Unnecessarily large, requires too many hands, Fuselage too wide, impossible to work satisfactorily from the after compartment. Forward cockpit too small and breezy, 9" x 9" board the largest than can be used there. Once past the mark no back resection possible and drift cannot be estimated properly or course plotted satisfactorily. There is no time to make calculations with a drift instrument.

The Aero cannot remain in the air long enough, maximum under 2 hours, too narrow a margin speed moderate, vibration excessive, cheap type of machine and not very satisfactory for air-survey work wings interfere with view sitting facing backwards, observer cannot see vertically below the machine.

The Bristol Fighter has distinct advantages in some ways, but rather too fast except for a fully trained hand, engine does not work smoothly at speeds under 80 miles per hour. Observer's cockpit rather small, machine vibrates a good deal and legible

## ***Topographical Air Survey.***

writing very difficult. The examples of air sketches accompanying this report were done entirely from a Bristol Fighter except the Mesopotamian sketch which was done from an R.E.8. A bigger board than 13" X 13" could be used by making special arrangements, the cockpit require slight modification. The machine being only able to keep the air for 2 hours is a distinct disadvantage.

The best type would be one built on the lines of a D.H. 9 or an R.E. 8. with an engine to drive the machine at a cruising speed of 65 miles per hour while the observer is at work, and at other times at a higher speed, say, up to 90 miles per hour.

The machine should be capable of carrying 2 observers (one behind the other) besides the pilot, petrol supply should be sufficient to last out fully 4½ hours.

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### **METHOD OF WORK.**

The experience gained by the writer of the report indicates that it is better for the observer only to indicate generally what course the pilot is to take and for the former really to have complete control of the exact air routes to be followed. A pilot cannot in fairness be expected to maintain a course set on a map and look after a machine properly at the same time. It is therefore essential that some simple means of communicating with the pilot should be used.

As in other branches of survey work practice is required, only with this difference one has to work at a far more rapid rate and the work must be carried on without relaxing one's attention a moment; this is where it differs principally with ground work. After a little practice it is not difficult to keep one's board fairly level, and properly oriented, this becomes automatic with practice.

Care must be taken to resect one position by rays from back points drawn in quickly with sight rule, having got this ray plot one's position from the starting point by means of the speed scale, after noting time by stop-watch (these speed scales are in distances covered in minutes and fractions, the actual ground

speed being known with reasonable accuracy). Draw in detail as it passes underneath or to either flank (by aid of speed scale and stop watch for distances) this becomes quite easy with practice. Note angles, roads etc. make with line of flight. In country similar to that shown in sketch of ground 'as obtains in Mesopotamia all these operations are not difficult with a little practice, the writer of this felt competent to do this class of work after eight day's practice and it is over country of this nature that this form of air survey can prove so useful.

Work over highly cultivated and organised country like England is a more difficult matter and of course calls for a higher rate of skill and unremitting attention on the part of the surveyor.

Over civilised countries this method of survey by eye would prove invaluable for preparing an accurate skeleton on which to tie down air-photo mosaic, it would be quite possible to run traverses over a large stretch of country, adjust these and include quite a sufficient number of fixed points to tie all the photos down, within about 5 % of the true distance on the ground, given a suitable machine and trained officers. This form of frame-work would be invaluable over country that cannot be triangulated or traversed; once given these tie lines the same officers could go over the ground and fill up rapidly the detail that could not be covered by air photo mosaics.

In country similar to that shown in the detail sketch in the Southampton Area, it is far better only to just sketch in what one can taking great care to (a) keep one's board level and oriented, (b) keep one's course carefully plotted by resection and speed scale. Then after inking up what details are known to be accurate to go over the ground again and fill in blanks, this is easy as one has sufficient detail already inked up to enable one to do the rest by eye to a great extent. Never get flurried, the writer confesses to a feeling of nervousness at first when the detail to be cut in seemed more than one could cope with; the more practice one gets the greater one's confidence, and once confidence is gained it is all right.

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Three months, training is advisable, though shorter periods will be found possible with officers who have a special aptitude for the work. The great thing is to learn to gauge the scale of everything quickly.

Before actually starting work a short run should be chosen between 2 points in a line down or up wind whose distance apart is known and this clearly explained to the pilot, and it should be ascertained before starting that he quite clearly understands what he has to do. It is assumed that the observer has previously ascertained the machine's equivalent ground speed in still air for the air speed he intends maintaining. The Bristol Fighter used by the writer of this report was a very reliable machine and gave a value of 83 miles per hour ground speed at 2,500 feet for an air speed of 80 miles per hour in still air; but it is always a good thing to test this periodically up and down wind on a measured course.

Having run along the measured course say down wind with a stop watch the speed of the wind can easily be obtained by subtracting the deduced ground speed in still air from the same down wind. Corrections can now be applied to the latter for all other courses while at work.

If time permits it is far better to run both up and down wind on the measured course, this gives a reliable ground speed from the formula:

$$\frac{\text{Speed down wind} + \text{speed up wind}}{2} = \text{ground speed.}$$

$$\frac{\text{Speed down wind} - \text{Speed up wind}}{2} = \text{wind speed.}$$

The starting point of the day's work, the direction on which the observer wishes to approach it, the speed to be maintained and height the machine is to fly at having been made clear to the pilot, once past the starting point the observer must control the courses to be subsequently taken. The simplest way of doing this is to tap the pilots <sup>left</sup> arm to indicate a slight turn to <sup>port</sup> and a succession of taps made till the machine is on the <sub>starboard</sub> desired course. When work is completed hand pilot a slip of



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paper to this effect. No other signals should be necessary unless the engine is giving trouble and it is necessary to turn home, the pilot can then tell observer his reason for doing so.

Telephones to fit on the head were not used by the writer of this report as the pressure on the back of the head from the propellor blast was as much as he could stand without adding to the discomfort by having the telephone head-piece fixed on his head as well. But there is no reason why a telephone should not be used, it would render communication with the pilot far easier and the difficulty about the air-blast on the back of the head could easily be overcome in any machine fitted up for survey work. In fact a screen to protect the head from the air-blast is a "sine qua non" for effective work as it is sometimes necessary to turn round to look at approaching ground, a knowledge of what detail is in advance as well as past the observer is sometimes essential, and turning round to do this is a very unpleasant undertaking in a Bristol Fighter which has not been fitted up to protect the observer in this respect.

Exact knowledge of the ground speed, direction and force of the wind, and the power to resect one's position from fixed points in rear of the machine as well as a reliable means of orienting one's sketching board are all essential factors in successful air survey work. How to ascertain the ground speed has already been dealt with, as well as how to ascertain the force of the wind. The direction of the latter can be obtained from the ground by noting the bearing along which the lowest clouds are being driven at, before starting and on landing after the trip. In clear weather a drift instrument can be used when in the air at the working height.

Resection from fixed points in rear can be done by aligning the ground speed scale rule on the fixed object like a sight rule.

Local mean time is required for the sun compass. Fly at least 6000 feet if possible, one gets a far better command of the country and one can work quicker and include a far larger area per run than at say 2000 feet. This applies to arid countries and not to England where it is very seldom the air is free enough

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from cloud to permit of this. The average height one can fly at in England is only about 2500 feet. A good eye for country is essential for successful work, this can be acquired after practice, one must also be a fair sailor, or acquire, this by practice.

One is always apt to exaggerate the scale of things at low altitudes.

In a highly civilized country like England an area sketch cannot be accomplished straight away. Route traverses must be carried out along the sides and diagonals. In a 500 square mile sketch this would take about 2 trips of  $1\frac{1}{2}$  hours each in a Bristol Fighter. These must all be corrected for scale and adjusted and then transferred after fitting them together on to a new board.

While flying one must work out approximately the ground speed on the various traverse courses, and use the nearest corresponding ground speed scale; they will vary owing to the prevailing wind having a different effect on the ground speed at each change of course, the estimated speed for each course should be noted down; these can be worked out and corrected on landing and traverses stretched out or contracted by proportional compass and a final adjustment made when fitting all the tie lines together when two corrections will be found necessary, i.e., (a) final correction for scale, (b) final correction for azimuth or direction.

The next step is to run a traverse along the central meridian and central east and west line, and then fill in the detail gridiron fashion; the number of the lines and their distance apart must be governed by what the observer can adequately fill in both sides of the gridiron lines. No attempt should be made to fill in the blanks straight away; land, pencil in, and colour up the work already done first and then complete the sketch by flying over the blanks and doubtful parts.

Any attempt to amplify or fill in over roughly pencilled work only leads to confusion, leave this till the work already done is inked up.

A pilot must not be expected to maintain the requisite grid-iron course, the writer of this report found it necessary to control the course throughout; blanks can be easily filled in as suggested above.

Never fly vertically over an important route as one can see nothing under the machine, keep it at least  $\frac{1}{2}$  a mile to one flank. If the wind is blowing obliquely to the course this will require constant attention on the part of the observer.

For area work adopt a perfect square or rectangle, lay out accurately on a blank board the sides, diagonals, central meridian and east and west line and keep the machine exactly over these lines by constant resection from back fixed points, never mind about detail, sketch in only what you can after plotting your course carefully, detail can easily be filled in once one has adjusted and inked up one's traverse lines referred to above. Before commencing work sun azimuth dials should also be protracted in the four quarter squares, this is very necessary as the arm gets in the way of the dials in succession as one orients the board for the different courses; this necessitates shifting the dial pin every time the arm does this.

A system of simple symbols is essential such as:—

- F. for farm buildings
- V. L. „ Valley
- R. R. „ River or stream.
- Rly. „ Railway
- R. „ Road
- W. „ Wood
- STN. „ Railway stations and so on.

Practice at retaining a pictorial representation of the ground in one's mind is essential, much may be retained in the memory and jotted down on the sketch after landing. The writer of this report invariably went over his work on landing and amplified his sketch in this fashion.

When learning how to survey in the air it is a very good thing to compare one's work with the published maps and note where one has gone wrong for future guidance. This teaches

one a lot and helps one to avoid similar mistakes afterwards, one is so apt to exaggerate the scale and draw in roads at the wrong angle and omit important detail which is plainly visible from the air; anything tending to effect the ground speed of the machine should be carefully noted at the time; or the scale of the sketch will vary in places from the true scale.

When altering course from one traverse to another, on reaching A (see Fig. 19) the machine should make a wide turn as indicated in the figure in order to give one about a minute to re-orient board, change ground speed scale, re-set stop watch and be ready for work again on re-passing A on new course.

To indicate one's wish to the pilot the writer used to attract the attention of the pilot to some prominent object vertically below the aeroplane then circle the hand round the head. Needless to say what the signal means must be clearly explained to the pilot before leaving the ground.

If this manoeuvre is not carried out the surveyor will find (as the writer did in his early efforts) that the aeroplane is gaily sailing halfway down the next lap before the surveyor is ready to start work on the new course with the result time is wasted in explaining matters to the pilot and getting back to the initial point of the new course.

The sitting-down position while sketching is by no means an advantage, it would be far better if the platform on which the observer's feet rest were lowered so as to enable him to partially stand up supporting himself on a seat like a "Miserere" seat in a Cathedral choir stall, the board should also be raised sufficiently to enable him to use a light sight - rule for resection and cutting in or for interpolation work.

Sights could be fitted to the ground - speed scale rules for this purpose.

The canvas side of the aeroplane should also be cut away at the top to enable him to see well down either side without having to crane his neck over the side where he gets the full air blast which is very unpleasant; a sloping wind-guard should be



provided to keep the air-blast off his head as much as possible; it need not be kept off altogether, up to a certain point one does not notice it once up in the air.

A dash-board is required for carrying watches, instruments pencil, etc. each observer must arrange them to suit himself and yet leave plenty of room for his board which has to be turned on its pivot for every change in the aeroplane's line of flight.

The best results in air survey would be obtained by two observers working together in one machine. No. 1 to carefully plot the course both as to direction and distance, noting carefully everything affecting the ground speed such as variation of wind, etc. He should at the same time plot or cut in any important points so that No. 2's detail may be adjusted and fitted on to these points.

No. 1 should be nearest the pilot and control the course.

No. 2 should sketch in the detail and plot his course as far as he can without sacrificing the sketching in of important features, detail is his most important job.

Plotting one's course is easier than sketching in detail, the latter class of work is a very severe test in England where there is so much to note down. In complicated country it is almost impossible for one observer to note down railway embankments, cuttings and bridges and railway stations etc., as well as get in all the other detail as has been shown in No. 1. sketch (Plate 3) at speeds of 80 miles per hour and over.

Salisbury- Winchester- Cowes- Christchurch Area sketch.

The sketch given is a copy of the actual sketch made from the air (see plate 3) Some of the Railway stations were sketched in and a few have been shown as examples.

In some places the area is covered with a net-work of roads impossible to sketch in accurately in the time. These have been generalised, many of the roads shown in brown on the  $\frac{1}{2}$  inch map are disused, grass grown, and could hardly be seen so have been missed, others have sprung into existence since the war, and there appear to be a lot of villas built which are not shown in

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the  $\frac{1}{2}$  inch map especially round the New Forest and places like Chandler's Ford.

No assistance was received from the  $\frac{1}{2}$  inch map except the names.

The base on which the work is done was a traverse from Winchester to Salisbury which was originally done for another sketch. It was corrected for scale and traced off on to the working sketch.

Traverse run between Winchester and Christchurch, latter and Salisbury, the latter and Cowes, thence to Winchester, Cowes to Christchurch, thence via Beaulieu to Calshott and thence to Cowes, 7 in all were carried out and adjusted and corrected, then traced on to the field section; these took about  $3\frac{1}{2}$  hours.

Gridiron courses were then run all over the area and the detail sketched in and inked up. Another trip was then made to fill in the blanks, total time actually at work, in the air 9 hours, area about 500 square miles.

The fair map was then made straight away. A print from the  $\frac{1}{2}$  inch Ordnance Survey map is also given (Plate 5) which will enable a comparison to be made.

A sample route traverse is attached (Plate 4) conditions for work of this nature are much like those obtaining in area work. The course should be carefully plotted and only important features cut in on the outward journey. On the return journey the rest of the detail should be filled in. Great care should be taken to note down anything that may affect the ground speed so as to enable the variance in the scale to be corrected as far as possible. It must be remembered that an aeroplane very seldom travels at a uniform ground speed throughout its courses, except on a calm day, though the air speed may be constant.

If a larger board than 13"  $\times$  13" cannot be used the strip of paper for a route sketch will not exceed 8 inches in width and unless a pilot keeps a straight course from start to finish one soon

gets off the board and must break off and transfer one's work over to the opposite side to counter-act this.

In a survey of a route between two points the true bearing from the starting point to one's destination must be known. This may be drawn down the centre of the board and pilot kept to this line throughout.

Or one may be directed from point to point till one arrives at one's destination. In this case provided the pilot knows his course it may be left to him, the observer merely keeping the course taken and shifting his work to the opposite side should he run off the board. But if there is any doubt it is far better for the observer to retain the map however small the scale, and control the course himself but he must remember in this case he cannot see the forward point as he is seated facing backwards, and he is responsible for arriving at each of these in succession till he reaches his destination. In any case the responsibility that rests on the pilot must be made quite clear to him before starting or the observer may find he has completely lost his way in the air. This actually happened once to the writer and only the fact that he had been previously over the ground on foot and recognised a town enabled him ultimately to reach his destination all right and before the petrol supply gave out. A strong cross wind was blowing at the time.

As compared with Mesopotamia air survey, work over countries like England is a good deal more difficult. It is in the former case comparatively easy to note down everything, keep one's courses plotted and board oriented and cut in detail on either flank. In the former country one could fly at 6500 feet, the air was free from haze and one was seldom bothered by clouds, whereas in England one can very seldom fly above 4000 feet often much less.

A sketch done from memory of ground similar to that surveyed before the writer of this report was captured, is given as an example. Area about 360 square miles, done in 2 hours (Plate 2).

## **Topographical Air Survey.**

By means of a reliable altimeter used in conjunction with a special form of clinometer it should be quite possible to deduce with fair accuracy (a) ground distance between points on the earth's surface, (b) ground speeds. This data would be invaluable over unmapped areas when it was considered inadvisable to land and carry (a) out on the ground.

Some experiments were carried out in Mesopotamia with good results, first over our own territory and then over enemy ground.

### **DESCRIPTION OF INSTRUMENTS USED.**

#### **COMPASS REFLECTOR FOR AIR-SURVEY WORK.**

*(See Figs 5—7, 13, 14).*

For assisting in orienting sketching board by the aid of an aeroplane compass in cloudy weather or when the sun is momentarily obscured by a cloud. A B is a hollow tube telescoping into a similar tube and admitting of extension or contraction to suit the distance the centre of the sketching board is from the central line of the axis on which A B turns horizontally i.e., axis a b. The reason for A B swinging in this manner is to enable the tube A B being swung to one side when not in use.

F is the box containing the aeroplane compass which may be of any form suitable for this class of work, both A B and F are fixed on to brackets on the side of the aeroplane.

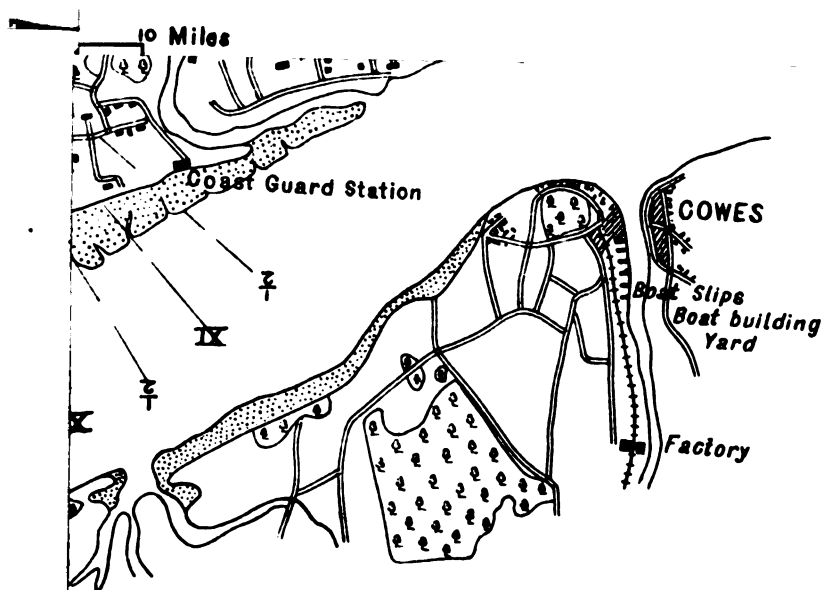
The pivot of compass in F is vertically below the prolongation of axis cd when A B is at right angles to the side of the aeroplane. The image of the N & S line of the compass card or "grid" is reflected in mirror G vertically above; which is fixed at an angle 45 to the longer axis of A B this mirror reflects the image on to a small elliptical mirror H parallel to G. H reflects the image through eye piece I to the eye of the observer, the observer sees beyond the mirror opening K the needle J on the sketching board, vertically below.

J is a thin flat needle pivotted at O the centre of the sketching board, set stiffly to prevent J from shifting easily. With O as centre is struck a small

**Sketching.**

# PLATE 3

## HURCH



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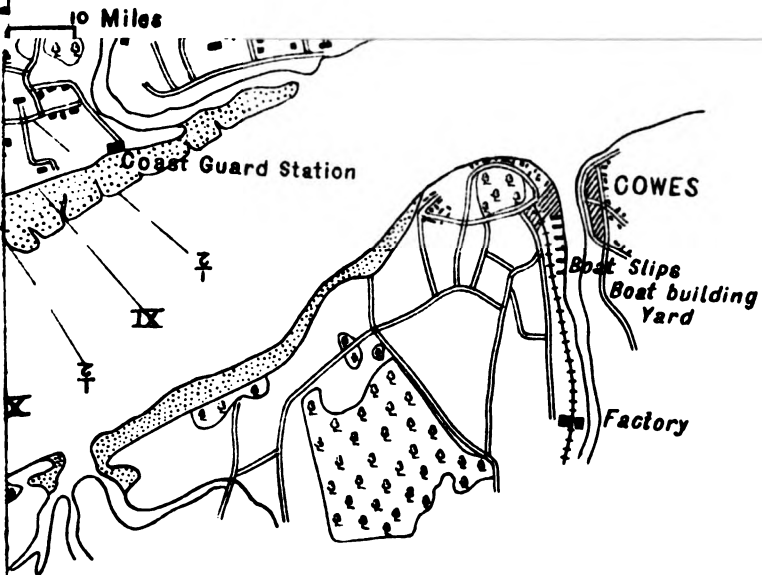
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# PLATE 3

HURCH

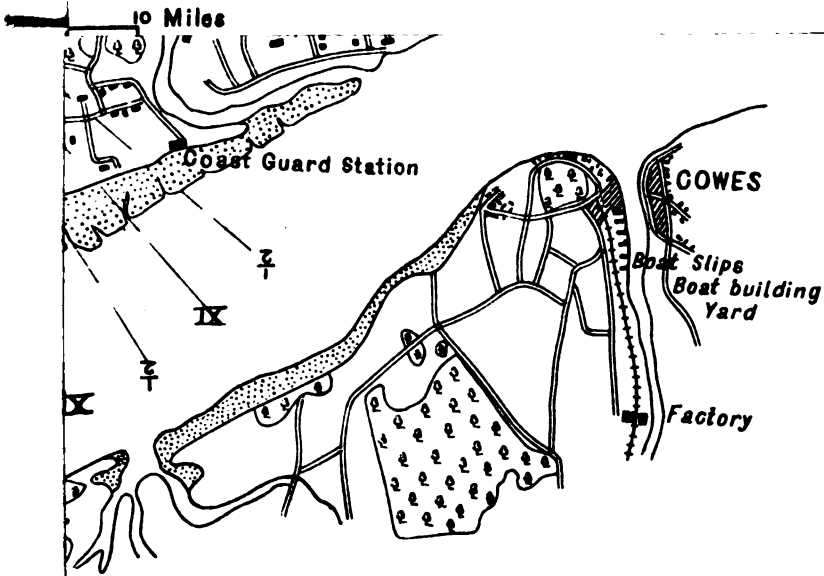






# PLATE 3

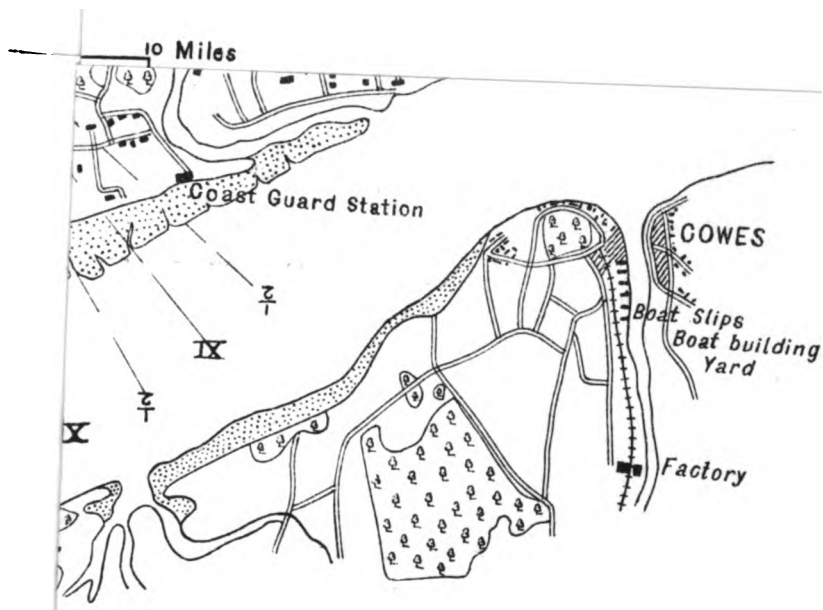
CHURCH





# PLATE 3

## CHURCH















complete arc, so that the angle J subtends can be read, this allows of J being re-set if it gets disturbed while actually using the board or sketching in the work.

The theory of the instrument is shown in figures 13 & 14  
Figures plate. The image of the N & S needle of the compass A B is reflected first on to mirror G and then on to H and appears as A "-B" (see fig. 13).

The eye at I sees this image on mirror H projected down on to the sketching board as A "—B" the limit of the mirror being shown by dotted lines (see fig. 13).

Now if the needle J on sketching board is so set that it represents the position of the compass needle when the board is truly oriented, every time the latter is swung out of position by a change in the direction of the aeroplane, all the observer has to do is to turn the board till the needle J of the board coincides in direction with the image of the compass needle thrown on board coincides with JJ seen vertically below the eye and beyond the limit of the mirror H (Fig. 14)

The determination of the correct position of J is a simple operation and need not be entered into here. The instrument is held in its place by a flexible metal arc X. Y. (see Figs 5 and 7) and a stud f, (Fig. 5) engaging in two holes h. h. (Fig. 7) according as it is in use or swung on one side when not required.

The brackets M & N supporting the instrument and compass as well as arc X Y to be mounted on a board capable of horizontal movement forward or aft (see fig. 6) four strong wing nuts clamp the board when in position. This is necessary so as to make the complete set adaptable to any form of aeroplane.

#### **BALL & SOCKET PILLAR STAND FOR AIR SURVEY.**

##### **SKETCHING BOARD (SEE FIGS. 1 TO 4).**

The sketching board is fixed by 4 screws on to boss A which is fitted with a spherical ball B which fits into a split cup C C.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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board is recessed at opposite ends to take must be set truly parallel to each other or on them will not travel true. The rollers slit B into which the end of the paper strip rolling to give the necessary grip.

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A spacing piece D of suitable thickness with a hole in the centre to take bolt E of the same length as the diameter of H and with rounded ends in section, is placed as shown in Fig 2. The ball B is gripped by cup C C by means of bolt F, power being obtained by lever G (a wing nut does not provide power enough) a little grease should be rubbed on ball B.

Spacing piece D keeps the inner faces of neck H H approximately parallel.

H is quite separate from H.

H is fitted with a boss I which is let in flush with the top of wood pillar J and is strongly screwed down as shown in fig. 1.

Pillar J is cylindrical and circular in section and can be moved up and down in clamp K, the latter is split along line L L and can be lightened up by wing nut M. A copper L-shaped spli, collar N is fitted as shown in Figs. 1 and 4 to give a better gript in actual practice this fitting was found necessary.

Clamp K is fitted on to a horizontal wooden transom (not shown) by means of 2 long bolts O.O. with a hole in its centre to allow pillar J to be raised or lowered. The transom is not shown as its shape depends on the type of aeroplane it is fitted to and can be easily fitted by any carpenter.

This form of stand allows of the sketching board being levelled, turned on its pivot (i.e. ball B) or raised and lowered at will.

### *Sketching Board.*

#### *(a) For area work.*

This consists of a plain square dial board with rounded corners and strengthened by 2 battens underneath, at the centre underneath is fitted a wooden block into which the stand boss is sunk flush and screwed down, size of board may vary from about 9'-x-9" to 2'x2-" according to type of aeroplane used.

#### *(b) For-traverse work (route traverses) See Figs 8 to 12, 16.*

The sketching board is recessed at opposite ends to take rollers A A. These must be set truly parallel to each other or the paper strip rolled on them will not travel true. The rollers are provided with a slit B into which the end of the paper strip is introduced before rolling to give the necessary grip.

A notched and milled wheel C fixed firmly to the roller by means of a screw D enables the paper to be rolled up. Milling is not sufficient, notching is also necessary to give the fingers sufficient grip should the paper tend to roll stiffly. The roller must have a certain amount of stiffness to prevent the paper unrolling, this is provided by means of a grip E and adjusting screw F, stiff wax should be put between the bearing surfaces.

Bearings G G are provided to take the roller; the latter is kept true by means of two screws H H which engage a small hole recessed in the centre of the solid and bosses of the hollow roller; wax should be inserted in all bearings.

The roller and its bearings are carried in a metal frame II, one end of which can be detached to assemble the mechanism. This frame I is let into a recess in the board and screwed on to it as shown.

Two metal guides J with packing pieces K guide the paper between the rollers and prevent the high wind in the observer's compartment from getting under the paper and wrenching it off. Without the guides it is impossible to keep the paper from being torn off its rollers. Underneath the board has the usual battens L, and wood boss M to take the metal boss of the pillar stand.

Two small sun-compasses are provided, on either side, these are essential as the route survey must be kept up the centre of the paper, its mean inclination to the true N and S line being taken up by the sun-compass. This is effected by turning the N and S line of the latter through the angle the route traverse makes with the N and S line on the earth's surface. The sun-compass card having been turned through this angle is clamped

by means of milled head screw N which keeps the card in the position set. Through the centre of N is a small vertical hole in which needle O is inserted to cast the sun's shadow on to the dial.

With the same centre as N a complete arc is struck on the board for setting the compass card. Either compass can be used whichever is the more convenient at the time.

The objection to a dial being drawn on the paper is the fact that it is constantly being rolled off and on and this necessitates the dial needle being taken out and refixed each time.

On the paper strip must be drawn the N and S line at, say six inch intervals parallel to the same line on the dials in order to preserve the direction of the true North on the route traverse sketch.

The centre of the latter would normally coincide roughly with the centre line of the paper strip. Should the former deviate to the left or right, the dials must be turned through an angle so as to bring the centre line of sketch parallel to the brass strips, the former being shifted to the centre of the paper. The new direction of true north must be ruled up afresh on the paper strip, or the change in arc the compass dials are turned through noted down at the point on the traverse when the change takes place and the direction of true north drawn in on return to the aerodrome or landing place.

It will thus be seen that the compass dials can be so turned as to keep the centre of the traverse line down the centre of the paper, this is "sine qua non" in a route traverse work. Any length of paper can be mounted on rollers A A provided the gap does not get completely filled up, it is best to use a fine lithographic paper mounted on muslin, plain paper is apt to get torn.

**SUN COMPASS.**

This is based on the formulae for Sun-Azimuth—

$$\tan A = \frac{\tan t \cdot \cos M}{\sin (E-M)} \text{ where } \tan M = \frac{\tan S}{\cos L}$$

A = Sun's Azimuth at time t.

t = hour angle before or after-noon.

S = Sun's mean declination for the day.

E = Mean latitude of sketch.

Having calculated the azimuth for the half hours before and after-noon, the dial can readily be prepared by means of a protractor, azimuths at quarter hour intervals can also be computed out if required.

Greenwich mean time is used corrected for difference of longitude of centre of sketch from the former station reduced to time and for equation of time to reduce it to solar time. Then the N and S line points to true north whenever the shadow cast by the sun of the vertical needle in the centre of the dial coincides with the time the watch shows, corrected as directed above.

Figure 15 is a normal dial, two hours before noon and four hours after would be quite sufficient for normal working hours except perhaps in a very hot climate when it might be advisable to start earlier and to recommence work later in the afternoon; in which case additional hour angles can be computed out and projected.

The dials shown on the sketching board approximate what was originally employed and can be used for all parts of the compass.

On an area sketch a dial is drawn on each quarter square as the body and the arm necessitate a shift as the aeroplane changes direction and the board conforms to these movements. The dial needle can be easily and quickly driven vertically in the board by means of a light wooden mallet. Ladies' hat pins cut to  $3\frac{1}{2}$  inches and provided with a small metal ball on top make very good dial needles.

**CLINOMETER FOR AIR SURVEY WORK.***(See Figs 20 to 23).*

Given the height above the ground by means of this instrument, the horizontal distance between any two points on the ground or the ground speed can be calculated.

Or given the ground speed or distance between any two points on the ground, the height of the aeroplane above the ground can be worked out.

The instrument consists of a rectangular frame A B C D fitted to a yoke E—F.

The instrument can be kept level by means of a striding level G fixed to a bracket H fixed rigidly to E F is capable of turning on a butterfly nutted bolt I which is fixed rigidly to a plate J which is in its turn fixed to slotpiece K which slides into a groove in bracket L. L is screwed on to the side of the aeroplanes. K is held in place by stop pin M.

To correct any dislevelment of aeroplane in a fore and aft direction all that is necessary is to turn the instrument round the horizontal axis I till the bubble G is in the centre of its run. The aeroplane must be kept on a straight course when taking readings and at a constant height.

Vanes N N are capable of sliding on bars R R till either O or O, or O or O,, (as the the case may be) coincide with the object to be cut in; at P is a horizontal wire vertically over another at Q.


Along A B and D C are protracted an arc with centre P P thus the angle between an object cut in by wire O, O O,, or O,,, and that of an object vertically below the alignment of P to Q can be measured or the time it takes for an object to travel from position of O (or O or O,, ) to a vertical below P. can be worked out by means of a stop-watch.

By these means the data mentioned above can be worked out.

In using N or N the object to be cut in is brought in line with P and O (or O, O,, or O,,, ).



*Ground Speed Scales.* (Fig 24) A diagram is given; these are similar to architects scales in shape but are not so wide, half an inch in width is sufficient and they should not be longer than 10 to 14 inches. They can be used as sight-rules and can be provided with light Sight-rule sights in addition. These are not shown; a complete set of ground speed scales is required from say 45 to 70 miles per hour, increasing by  $2\frac{1}{2}$  miles per hour, and from 70 to 130 miles per hour, increasing by 5 miles per hour, 2 scales to go to one ruler.



## **MILITARY MATTERS.**

### **PRESS COMMUNIQUE**

With the approval of the Right Hon'ble the Secretary of State for India, the Government of India propose to introduce in the year 1921-22 the following measures for the improvement in the conditions of service of British Officers, Indian Officers, Non-commissioned Officers and Men of the Indian Army.

#### *British Officers.*

The Secretary of State has authorised the Government of India to provide in the Budget of 1921-22 for certain of the concessions recommended by the Esher Committee. Details of the concessions are still under discussion between the Government of India and the Secretary of State. It is the intention in the first instance to introduce, with effect from 1st April 1921, improvements on the lines of the Esher Committee in regard to pay, leave allowances, acting allowances, and assistance for the upkeep of chargers, in the shape of free forage, sais allowance, etc. A further announcement as to details will be made as soon as possible.

#### *Indian Ranks*

The following measures will be introduced with effect from 1st April 1921:—

#### *(1). Pay*

The existing rates of pay for Indian Officers will be increased to the following scale:—

		Artillery
		Infantry
		(non-silladar) Pioneers
		S. & M.
	Rs. p. m.	Rs. p. m.
Risaldar Major & Subadar Major	250	200

(Plus in each case the personal allowance of R. 50 p. m. now drawn)

Risaldar and Subadar	180 to 210	130 to 160
	(by annual increments of Rs. 10 p. m.)	
Jemadar	85 to 110	75 to 100
	(by annual increments of Rs. 5 p. m.)	

(In all cases these annual increments may be withheld by the commanding officer where service rendered has not been fully satisfactory).

Risaldars and Subadars with one or more years' service in the rank will receive the first increment immediately and draw Rs. 190 and Rs. 140 p. m. respectively.

The rank of Ressaidar in cavalry regiments will be abolished with effect from 1st April 1921, from which date all Indian Officers then holding that rank will be promoted to Risaldar.

Indian Officers of silladar cavalry regiments will, as a temporary measure pending conversion to a non-silladar basis, receive an increase of pay equivalent to that given to corresponding ranks in non-silladar cavalry, i.e. Risaldar Major Rs. 60 p. m. Risaldar Rs. 10 p. m. (provided he has one or more years' service in the rank), and Jemadar Rs. 10 p. m.

The existing rates of pay for non-commissioned officers and men of cavalry (silladar and non-silladar), artillery, infantry (including the Guides), Pioneers and Sappers and Miners, will be increased by one rupee per mensem.

*(ii) Extra Duty Pay*

The following improved rates of extra duty pay will be drawn in lieu of those now authorised:—

	R. p. m.
Indian Adjutant ... ..	30
Indian Quartermaster ... ..	30
Regimental Dafadar Major } ...	15
Regimental Havildar Major }	
Regimental Quartermaster Dafadar } ...	10
Regimental Quartermaster Havildar }	

**Military Matters.**

Squadron Dafadar Major & Quartermaster Dafadar	}	8
Battery or Company Havildar Major		
Company Quartermaster Havildar		
Trumpet, Bugle or Drum Major		10
Pay Dafadar or Havildar		6
Drill Naik		8

Existing rates will continue to be drawn in any case where they exceed the above.

*(iii). Good Service and Good Conduct Pay*

Revised rates, and periods of service for which drawn, are as follows:—

Rs. p. m

*Good service pay for non-commissioned officers*

Naik & Havildar	}	after 2 years in rank	2
Lance Dafadar & Dafadar		after 4 years in rank	4
<i>Dafadar and Havildar only, after 6 years in rank</i>			6

*Good conduct pay*

Sowar sepoy	On completion of 2 years service	1
etc.	On completion of 4 years service	2
	On completion of 6 years service	3

*(iv). Allowances and Class when Travelling*

Indian officers with honorary commissions, and their families, when travelling on warrant, will in future receive first class accommodation.

Other Indian officers and their families, when travelling on warrant, will continue to receive 2nd class accommodation.

The present detention allowance of Re. 1 per diem admissible to Indian Officers when on detached duty, will be increased to Rs. 2 per diem.

*(v). Free Issue of Equipment*

In future, Indian Officer on promotion from the ranks will receive a free issue of uniform, which will become his own property.

A sword, belt and tent, will also be issued free, and will be retained on regimental charge. An Indian Officer, on honourable retirement, will be permitted to retain his sword and belt without payment.

**(vi) Religious Teachers.**

The following improvements will be made in the conditions of service of religious teachers in Indian units:—

(a) The present establishment will be increased to one for each class of the strength of a squadron or company, or more, in each cavalry regiment, infantry battalion, Brigade of artillery or Corps of Sappers and Miners.

(b) Pay will be increased from Rs.15 to Rs.25 per mensem, in addition to which free rations will be admissible.

(c) A gratuity will be admissible on retirement, calculated at one month's pay for each complete year's service as a religious teacher. It will be granted on the recommendation of the commanding officer of the unit.

**(vii) Provision Of Charpoy Etc.**

Government accepts the liability of providing each man with a charpoy and a kit box and as soon as arrangements can be made the supply will commence.

Provision of free lighting for Indian troops, on an adequate scale will similarly be undertaken.

**(viii) Institution of a Clerical Service.**

With a view to improving the conditions of service and increasing the efficiency of clerical establishments of Indian units, a scheme has been formulated for the purpose of placing these establishments on a more satisfactory basis, particularly as regards the status of the clerks, and improving their rates of pay and pension. The scheme will not apply to units which have not been selected for permanent retention in the Indian Army, nor to silladar cavalry regiments until the latter are converted to a non-silladar basis.

The old system of contract allowances will be abolished and clerks will be paid by Government, separate allowances being given for various categories of contingent expenditure.

## **Military Matters.**

The senior clerk of a cavalry regiment infantry battalion and Corps of Sappers and Miners, will be a Jamadar and will receive the Infantry pay of his rank with grade pay at two rupees a day. Other clerks will rank as Havildar, Naik or Sepoy, and will be given Infantry pay of their rank with grade pay at two Rupees, one Rupee eight annas, and twelve annas, respectively, per day. In addition they will be eligible for good service or good conduct pay, free rations, clothing, and all other concessions admissible to corresponding ranks of Infantry.

Consequent on the above, the existing contract allowances will be abolished, office rent and the replacement of typewriters and furniture will become a Government charge, while a special allowance will be granted for contingencies.

Armourers and moochis, now paid out of the contract allowances of units, will receive staff pay—Head Armourer Rs. 30 p. m., Second Armourer Rs. 15 p. m. and Moochis Rs. 7-8-0 p. m.

2. A scheme for the introduction of an Indian Army Educational Corps, similar to that of the newly formed Army Educational Corps for the British Army, is under preparation and details will be notified shortly. This corps will consist entirely of Indian officers and non-commissioned officers who will comprise the specialist personnel to be attached to all units of the Indian Army

3. It is proposed to grant certain concessions for the purpose of encouraging Indian Officers and "other ranks" to acquire a proficient knowledge of English. Details are under consideration.

4. The family pensions of Indian Officers and Indian "other ranks" of Artillery, Sappers and Miners, Cavalry and Infantry, are being revised and sanction is being accorded to increased allowances for the support of families and children's allowances on the lines of the Esher Committee proposals.

The new rates will be extended to all existing family pensioners, arrears being drawn from 1st April 1918, or date of death, whichever is later, and orders on the subject will be issued very shortly.

It is hoped very shortly to introduce a system by which Army horses are boarded out with suitable members of the Public.

This system was most satisfactorily worked in the United Kingdom before the War. The main provisions are, that trained army horses are immediately available on mobilization while the cost of their keep is borne by private individuals, who require horses without incurring the cost of purchasing, thus conferring mutual benefit

The conditions will be as follows:—

- (a) No hire will be paid for horses boarded-out, but the person who takes a horse will be required to insure it with an approved company for Rs. 1,000 and to hand over the policy to the Officer Commanding the cavalry regiment from which the horse is drawn.
- (b) The person who takes a horse will be responsible that the horse is properly fed, stabled and cared for, and will permit of the Officer Commanding the unit or his representative to inspect the horse when he wishes.
- (c) The horse will not be moved from the allottees station without previous consent of the Officer Commanding the unit.
- (d) In the event of mobilization or the Officer Commanding the unit deciding that the horse is not being properly cared for the allottee must agree to return it immediately to the cavalry regiment from which it is drawn.
- (e) The expenses of moving the horse from its unit will be borne by the person taking it, but the expenses of returning it to its unit will be borne by the State.

The method of obtaining a "boarded-out" riding horse will be to apply to the Officer Commanding the cavalry regiment from which the horse is required.

It is hoped to have this scheme in operation very shortly, and intending applicants should register their names with the Officer Commanding of the nearest cavalry regiment for consideration.

There is no restriction in the number of horses that may be allotted to any one person, nor will there be restriction as to uses, the horses may be put to subject to the power of Officer Commanding the unit to withdraw a horse that is being over-ridden or worked.

An officer must be in possession of his regulation chargers before he can have a "boarded-out" horse.

### **Proposals for Education in the Indian Army.**

In August 1919 the Secretary of State for War informed the House of Commons that it had been decided that education should form an integral part of Army training, and at a later date the President of the Board of Education, speaking in Parliament on behalf of Mr. Montagu, stated that the scheme of educational training for the British soldier would be applied *mutatis mutandis* to the Indian soldier. His Excellency the Viceroy in his opening address to the Imperial Legislative Council in September last stated that the Government of India had the necessary measures under consideration. Budget provision is now about to be asked to enable effect to be given during the coming financial year to the policy that education shall form part of the normal training of the Indian soldier, as it already does of his British comrade.

The immediate end which this education has in view is the fashioning of a fully trained soldier, mentally fit to meet the exacting demands of modern war; the ultimate end is the making of a man capable, first of an enlightened citizenship and secondly, of increased economic efficiency. A reasonable standard of general knowledge is necessary to the attainment of the immediate end.

With the ultimate end in view the direct teaching of citizenship is contemplated, and the provision of facilities either within



or without units, for instruction in agriculture, horticulture, dairy. ing, animal husbandry, veterinary science, farm economics, including co-operation as applied to farming, agricultural engineering, elementary mensuration, land surveying and tenures, and where desired, instruction in cottage and village industries, together with co-operation applied to those industries.

An Indian Army Educational Corps, similar to the newly formed Army Educational Corps of the British Service is about to be established, as recommended by the Esher Committee. This Corps will consist entirely of Indian Officers and Non-Commissioned Officers who will comprise the specialist personnel to be attached to all units of the Indian Army. This personnel will as far as possible, be selected from the Indian Army, and will be trained for its duties in an Indian Army School of Education similar to the Schools of Education recently established in England for training educational personnel for the British Army.

The lines of organization have now been definitely laid down, but it must necessarily be some time ere the machinery is fully manned. The scheme as a whole constitutes the greatest experiment in adult education yet attempted in the East. There is no reason to doubt that this form of education will be as successful in India as it has been in England and that the Indian Army may be confidently looked to in the very near future to return annually to civil life soldiers who are not only competent to fight for their country, but who are also educated men, competent workmen and good citizens.

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## **REVIEW OF JANUARY NUMBER OF "ARMY QUARTERLY"**

The January number of the Army Quarterly maintains the high standard of the opening number. The Editorial preface draws attention to the controversy raised by the article "India at the Cross roads", in the first number, and claims that the ventilation of the point of view therein advanced, was justified by the comment drawn forth, which was both commendatory and condemnatory. This exemplifies the value of an impartial and unofficial publication.

The Esher Report is next dealt with in relation to the point on which controversy has mainly focussed, i. e., the relationship between the Commander-in-Chief in India and the C. I. G. S. at home. The Editor points out that the meaning attached to the words "influence on military policy" by the "Times," is one which the Esher Committee never intended and probably never thought of. All responsible soldiers agree that decisions as to policy are the function of the Executive Government. When the Committee suggested as a basis on which to lay the foundations of a sound Imperial military system, consisting among other conditions in allowing the Imperial General Staff, through its chief to exercise a considered influence on the military policy of the Government of India, it seems clear that the Committee attached a very different meaning to the word "policy" to the interpretation adopted by the "Times".

The first article-- "The Versailles Supreme War Council"-- is by Sir F. Maurice and in it the author describes the history and work of the Council during the war. The general misconception regarding the origin and functions of the Council is responsible for the conviction held by some critics that "but for the blind and senseless opposition of certain soldiers the Council could, and would, have given us an earlier and more complete victory than that we gained. General Maurice exposes

this fallacy and explains why no supreme commander was appointed until March 1918, when Marshal Foch was charged with the task of co-ordinating the operations of the French and British armies, as it was clear that it was beyond the powers of any Council of Ministers of State to ensure effective unity of executive military command

Once the question of Command had been happily settled, the Supreme War Council was able to devote itself to its legitimate functions, which were the co-ordination of Allied policy, and the utilization of the resources of the Allies for the common purpose of defeating the enemy. In fulfilling these functions it is shown to have been eminently successful.

The second article "The Defence of the British Empire" by Major-General J.H. Davidson is of great interest to all students of Imperial Strategy. The writer discusses the various possible ways of ensuring the control and co-operation of the forces of the Empire. The views of different authorities are given and analysed, and it is held that they resolve themselves into 3 alternatives:—

- (1). The establishment of a Ministry of Defence.
- (2). The creation of a special machinery in the General Staff.
- (3). The development of the Committee of Imperial Defence, by grafting on to it a permanent joint advisory board.

These alternatives are then considered, and in this examination the problems of India receive careful consideration. Finally the writer gives the recommendations of the Parliamentary Army Committee of the House of Commons, and elaborates the scheme submitted by them.

The article on "Marshal Foch" by Colonel Grant dealing with the period from 26th March to the 11th November 1918, is of the greatest interest, both from a historical and biographical point of view. The author quotes the passage "Read no history, nothing but biography, for that is life without theory", and although readers will probably not endorse

that dictum in its entirety, it may be agreed that this study of the personality and reasons actuating the decisions of Foch is most instructive both from a psychological and purely military aspect, and should be carefully studied.

"Machine-Gun Tactics and Organisation" by Major Uright, late Guards Machine Gun Regiment, traces the progressive expansion of machine Gun formations from the days of the regimental machine-gun Section of 2 guns, to the machine-gun battalion of 64 guns. He shows how trench warfare was largely responsible for their organization into increasingly larger units. The writer points out how, under the conditions of trench warfare, opportunities for the use of the direct fire of machine guns were rare, which in 1918, under the conditions of mobile warfare, machine gunners gladly and inevitably seized their opportunities and reverted to the use of direct fire.

"The divorce of soldier and civilian" by Ernest Thurtle is an essay designed to show that if those responsible for ordaining war were the first to suffer in their persons the horrors of war it would largely tend to the elimination of wars. He holds that "it is probably true to say that military men to day hold war in greater abhorrence than do civiliaus", and he considers that as the fighting man is so vitally affected by the policy of his rulers, he should have more say in the matter of declarations of war. He even goes so far as to maintain, that before a soldier is ordered to fight, he should be given the option of doing so or not according to the dictates of his conscience. He, however, realises that this idea is Utopian until such time as all nations without execption are prepared to abide by it, and that time is not yet.

An article on intelligence reviews the functions and organization of existing agencies and deduces lessons for the future in which the writer strongly urges the importance of co-ordinating all such agencies so that the present Admiralty War Office, Air force, Air ministry and other Intelligence organizations may be merged into one central organization.

Of the remaining articles ; in " the Scapegoat of the Battle of the Marne " General Edmonds examines the question of who was responsible for the issue of the order for the German retreat.

The French Plan of operations August 1914, gives the orders for all the French army commanders.

Lt. Col. Beauman in the tactical training of the junior officer deals with an important subject and the article on " Detachments and their Commanders " examines the roles of the various detachments used during the recent war in Egypt, Mesopotamia etc.

The Review closes with appendices giving stations of units, Commanders, etc.

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## **PRECIS AND TRANSLATION.**

*'REVUE MILITAIRE GENERALE, OCTOBER 1920.*

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The first two articles are tactical records which may be mentioned on behalf of those who wish to read them in detail. General Salle contributes an incident from the Eastern front, in the capture of the town of Florina (Salonika, September 1916): as an instance of the splendid capabilities of the French troops under conditions widely differing from those in France and Flanders, in a campaign which so far has remained comparatively obscure owing to the greater importance of the west. Next, Colonel Boullaire gives at some length and in considerable detail the operations of the 2nd French Cavalry Corps in bringing to a standstill the German offensive on the Ourcq between May 28th and June 5th 1918. His article is accompanied by a good sketch map, and may be commended to all students of cavalry tactics.

Colonel Defrasse gives in the third article some reflections on the French Recruiting Law. Now that the conscript armies of the greater nations are being revised to post-war conditions, studies of the methods employed by the greatest nation which still adheres to compulsory service are of special interest; and a translation of Colonel Defrasse's study, which is not a long one, may be of service.

*( Translation. )*

Between the years of 1870 and 1914 there have been four successive and different recruiting laws, and a fifth is about to be made. We may well ask what shape it is likely to take.

During the late war, we gladly told ourselves that this was the war to end war. Yet, from amongst those who said so even with a more or less deep conviction, how many are there who would still be prepared to repeat it: in the face of the passions of half the world let loose, the difficulty of enforcing the actual

peace treaty, the only half-concealed armaments of Germany, and the imperialism of the Soviets Government whose initial acts were directed only towards the destruction of the army?

Certain writers have already approached the subject: the general trend of the schemes advocated includes two elements:— firstly a nucleus of regular soldiers to safeguard the frontiers in normal times, and secondly the annual calling up of a contingent for just such time as is necessary to transform the civilian into a soldier fit to take his place in the field army in case of attack by ambitious neighbouring nations. The period of military training is variously put at one year, fifteen months, or eighteen months, according to the views of the writers and the arms they have served in.

It still seems, however, that no one so far has touched upon the necessity of giving the recruiting law sufficient elasticity to allow Government to safeguard the security of France at all times: whether, as in 1912 and 1913, she has to face increases in the armaments of her neighbours, or whether she may for some or other reason be unable to obtain by voluntary enlistment the essential numbers she needs for the important duties of her nucleus of regulars.

Let us see what is necessary for the elasticity that every recruiting law must possess. A brief analysis of the recruiting laws since 1870 should shew us the conditions to be fulfilled, and the importance of the matter.

(i). The Law of 1872, called the 5-year Law.

This law allowed exemption not only to those unfitted for military service, but to a considerable number of other categories, sons of widows, etc. It established voluntary service of 1 year for young men who could pass an examination which gave those who passed sufficiently well the chance of becoming Reserve officers. Amongst these, a passing-out examination could deprive those who had not taken sufficient advantage of their training of their rights as volunteers, and could retain them in the service.

Outside these categories, the remaining bulk of the annual contingent was liable for five years service in the active army. The presence however of five complete contingents with the colours at the same time would have meant too great a standing army: each year's contingent was therefore divided by a kind of lottery into two classes, the first of these had to do its full five years, the second one year only. The strength of the second class was fixed annually by the War Minister.

In actual fact, the first class seldom completed its whole five years, and its duration of service was very appreciably less: this gave the great degree of elasticity which has been mentioned.

According to the law, military service began in the July of the first year of liability: actually the men were not called up until November, which took four months off their five years. At the other end, the class nominally ending its service in July, it was always sent home on leave at the end of manoeuvres, i. e. at the end of September in the fifth year of service, which saved another nine months. Altogether then there were 13 months to be deducted from the lawful service of 5 years: and the actual colour service of the first part of a contingent was for three years and eleven months, that of the second portion being for ten months, since they too were released after the manoeuvres in September.

Suppose then that pressing external conditions should oblige the Government to increase its effectives; it had at its disposal the following three methods, employable separately or all together, so long as Parliament should vote the necessary credit:—

- (a). Alter the strength of the second portion of the contingent, or even suppress it altogether.
- (b). Forego the release after manoeuvres of the class in its fifth year of service at the time, either to the end of its five years or until the last joined class was fully trained.



(c). Call up the new class in July instead of November.

It will be seen that by the use of those three expedients, either separately or simultaneously, Government was in a position at all times of the year to meet every eventuality; by realising, at need, even a stronger force than Germany, with its normal contingents and rigid 3-years law, could produce at that period.

We may be certain that these particulars had been studied in detail by the Germans; and that, although we were never called upon to bring them into play during the operation of the 1872 Law, they exerted considerable weight towards the maintenance of peace, by reason of the elasticity which they afforded to the French Government.

(ii) Law of 1889, or Three-years law.

This law abolished exemptions other than unfitness for military service, and also did away with the one-year volunteers, making the period of service three years. Service was reckoned from October 1st, the men were called up at the beginning of November, and released at the end of the manoeuvres immediately preceding the termination of their three years.

The division of each year's contingents into two portions was still adhered to, as the contingents were swelled by the categories previously exempted, and the presence of three years' classes with the colours at one time would have given too great a strength in effective. The first portion served for two years and eight and a half months, the second for about eleven months.

At the discretion of Government, in the circumstances already mentioned, it had still three steps open to it:—

- (a) To call up the men in October instead of November,
- (b) Release the senior class at the end of October instead of September
- (c) To reduce or suppress altogether the second portion.

The first two steps would only afford an appreciable increase during the month of October, on a fixed date and for one month only. A dangerous neighbouring nation could therefore plan too

easily to avoid the consequences of this increase. The third step would only become effective from the time that the second portion of a class fell due for release:—again on a fixed date.

Although, then, elasticity had not altogether disappeared, it was much diminished, and the fact that it could only be made use of at fixed dates detracted greatly from its efficiency.

(iii). The Law of 1905, or Two-years Law.

This law fixed colour service universally at two years; but, as it imposed upon the Reserve officers a period of training every other year, officers who continued in the reserve up to the age of forty had to perform seven or eight months service more than the men of their year; which was, as one must allow, a curious method of building up the reserve of officers which we nevertheless needed very badly.

Colour service was reckoned from October 1st to October 1st: contingents were called up in the first fortnight of that month and released towards the end of September, thus doing twenty-three months duty. In this case, elasticity disappeared altogether, since every man served the full time fixed for him by the law. One may almost say that it became negative, for even the most determined supporters of the law had acknowledged during its discussion that a considerable permanent strength was essential to the satisfactory condition of the army: yet this condition had not been fulfilled before or after the passing of the law. The law, since it made no provision for possible measures in the event of this condition not being fulfilled, or for the safeguard of the country at all times, contained in itself the germs of its speedy dissolution. At the first grave crisis, it was abolished. What happened then may well serve us as a lesson. Notwithstanding the acute danger, and in spite of the insistence of Government and the efforts of Parliament, eight months of discussion had to elapse before the new law was passed and put into effect. Even then, since that law could bear no fruit for its first few months, a year in all passed in the remedy of a particularly grave situation which called for instant relief. One may well ask: shall we always have a year to spare?

At the time in question we came very near to not having it; and, had the German attack taken place in March 1914, when the latest class of recruits was not yet mobilisable, we may, conjecture as to what might have happened.

In the future law then, we must see that the measure of elasticity which alone can make it a permanent measure is duly incorporated. Only that elasticity can put Government in a position to meet all national contingencies, by guaranteeing it at any time a strength in effectives above normal needs, and so allowing it in normal times to dispense with the full legal period of colour service although assuring to it a big increase of strength when circumstances demand it.

A three-years law, which at the same time allowed the executive to call up the classes later than the legal commencement of their service and to release them before its conclusion, would cover all the varying needs which the coming years may bring; and would also allow the creation of a permanent nucleus of adequate size as well as a diminution of the period of colour service. The power of retaining the contingents as long as desired within their legal period would render possible the creation of this nucleus without delay, which is an essential condition to short-service methods.

Each year a certain number of young men volunteer for service before they are called up; three-year engagements could be authorised on the condition that men who choose their own corps and their own time of joining should serve the full time; this would afford a certain reinforcement to the permanent nucleus, composed of men serving longer than the rest of their year's recruits.

It will also be necessary to take special measures for the recruitment of officers and N.C.O's to the reserve when the period of service is reduced. Lastly, so long as the length of service does not fall below two years, it should be possible for students to obtain some postponement of their calling up or to take their degrees and pass their examinations; so that those who desire it should not have their studies interfered with.

Provided that Government can dispose of a colour service longer than the normal period; it will be in a position to meet unexpected and dangerous situations; subject only to getting Parliament to vote the necessary credits: in point of fact its possession of this resource is the best way of ensuring that such situations will not arise.

The shortening of the colour period should be effected in two ways, by deferring the calling up of each class and by releasing it before the expiry of its legal service: by this means we may obtain the elasticity which was so well assured by the Law of 1872 and which does genuinely afford to Government the power to meet the difficult situations which the implacable enemies of France will not desist from creating. Also this reduction of service is very probably the best way of reducing military expenditure without running risks; and for years to come we shall be obliged to maintain extreme care and forethought where any military reduction is contemplated.

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## **DER. DEUTSCHE GENERAL STAB**

*"In Vorbereitung und Durchführung des Weltkrieges."*

*Von H. von Kuhl. (Mittler und Sohn. Berlin, 1920.)*

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The literature of the late war is attaining such vast proportions that the student finds an ever-increasing difficulty in selecting the books which will really repay study. To those who wish to obtain a glimpse of the workings of the German military mind, especially in its activities prior to the war, General von Kuhl's book can be confidently recommended. It is essentially the defence of a body of which the author was a member for twenty-two years and in which he held high offices. He has to answer many charges, but the two that appear to have wounded him most deeply are: that the General Staff underestimated the forces that would be arrayed against Germany and—the second is to some extent a consequence of the first—that they drove the country to war.

The larger part of the book is, therefore, devoted to appreciations made by the General Staff, prior to the war, of the value of the forces of potential friends and potential enemies. France, Russia and Austria bulk most largely in the picture as military not naval, forces were under consideration, but the author states that England was reckoned as a certain enemy and that her army and the extent of its possible expansion were examined with care. He appears himself to have been employed as chief of the branch of the General Staff dealing with the British Army, for he kept von Moltke informed on this head and was surprised that the latter should have told von Tirpitz he was going to place the English troops under arrest when they arrived. The following was the German official expression of opinion in 1912:—

"The British Army is small indeed but of the same standard as our own.....The officers are men of good family, athletic, of a practical turn of mind and of great personal energy. Neither their general nor military education is quite up to the mark. On the other hand, many young officers and nearly all the senior officers have had experience of small wars.....The British soldier attains a high standard of individual training.....The discipline is good though not of a kind that corresponds to our ideas.....Marching and musketry are up to standard. Ground is skilfully used. The signal service is particularly good." And in another official account it was stated of the British soldier:—"A glorious history teaches, and numerous battlefields in every part of the earth prove, that he has always known in every age how to die for the honour of his arms."

The Germans had a considerable admiration for the French Artillery and followed the discussions between General Percin and his opponents with considerable interest without committing themselves to a policy in agreement with that of either party. As to weapons, they knew they were superior to the French in heavy guns and, though they realized the value of the independent line of sight and the fine ballistic qualities of the *Soixantequinze*, they believed—wrongly as they were to recognize later—that the superior lightness of their equipment would be found to be an adequate counterpoise to those advantages.

The general conclusion arrived at by the General Staff in their pre-war studies was that they were surrounded by bitter enemies whose forces were largely in excess of their own. Such a conclusion was not likely to lead to a desire for war. They pressed the need for strengthening the German forces very strongly upon the Government but with insufficient success; and, in 1914, they regarded the world-situation with the gravest anxiety. It was their duty as soldiers to exhibit a faith in victory once war was declared but they did not want war and entered upon their great task with feelings far from optimistic.

The professional soldier will probably find most value in the story of the German plan—its inception by the great von Moltke and its changes and development in his hands and in those of his successors till it took the shape in which it was eventually executed. The figure of Count von Schlieffen looms largely here. He is, for the author, the greatest of all great German soldiers. It was his plan in the main that held the field to the end, but the changes wrought in it by the younger von Moltke, though not great, were essentially vicious. Von Kuhl does not go quite so far as to say this, but it is clearly in his mind. The great, hard-hitting right wing was weakened, the left no longer refused, but made ready to wage, if necessary, a battle of its own. For any such plan more men were essential. If the demand for three Army Corps made by Ludendorff in 1912 had been granted, the battle of the Marne might well have proved a victory for Germany. The General Staff fully recognized the imperfections of their plan, but with the numbers at their disposal they could not improve upon it. The main trouble was that they could not be strong enough in France without leaving their forces in East Prussia dangerously weak.

The actual work of the General Staff in the war is dealt with in very few pages. Von Kuhl is largely exercised in replying to charges that the Staff led safe and luxurious lives in sheltered regions, that they were wholly out of touch with the troops—that they never visited the front line, that they would accept nothing but favourable reports of the troops from commanders, that officers reporting troops under them as unfit to fight were removed—all of which he declares to be wholly untrue. In disproving them he throws valuable light on his own methods of handling a staff. Finally, he gives three examples of General Staff work on a big scale out of his own experience as Chief of the Staff of an Army and then of an Army Group.

The author does not, apparently, realize that the world has given a final verdict in the matter of apportioning the guilt for the Great War, for he wastes considerable space in

trying to prove Germany to have been an innocent lamb set upon by malignant foes. He makes a better case in asserting the innocence of the General Staff, but a judicial inquisition might demand the inspection of papers other than those he has produced. These pleas of innocence may be merely inserted as propaganda and as such they may be the more effective in that German works at the present rate of exchange find far more purchasers abroad than do English or even French works. The book, however, in spite of these imperfections is well worth reading.

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## **REVUE MILITAIRE SUISSE, NOVEMBER. 1920**

THE ISSUE CONTAINS FOUR ARTICLES BESIDES  
THE USUAL CHRONICLES ETC.

*Military Ski competitions, by Colonel Grosselin.*

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The aim of this brief article is to shew that such competitions should be limited to tests of skill with ski and not of tactics as well. Present ones apparently comprise competitions between a number of small patrols which are set tactical exercises and are marked for their tactics and their ski-ing alike. The writer's objections to their including tactical tests are as follows:—the principles of patrol tactics are the same whether carried out by cavalry cyclists or infantry and can be equally well tested on foot as on skis; men who are well acquainted with the terrain where the test takes place have altogether too big an advantage over the others: and, since ski-ing on bad ground can lead to serious accidents, the tests can only be carried out under far easier conditions and risks than would be imposed upon the men in war, which makes them unreal.

Colonel Grosselin advocates the complete divorce of tactical from technical tests; and, whilst fully admitting the value of each, would prefer to see the technical tests carried out at the military winter competitions and the tactical ones in the summer without ski. His article is given a leading place as being probably of great interest in view of the approach of winter: Swiss military opinion apparently attaches much importance to military ski-ing, more so than the Swiss Government which is again advised to help the competitions by its active support.

*Indirect machine-gun fire, by Captain Monod.*

A somewhat elementary article composed of simple principles and containing nothing that is not already in our own military textbooks and Staff manuals. Two of the writer's con-

clusions however are interesting. Firstly, his announcement that indirect fire must, to be efficient, be carried out in mass by several machine-gun companies together, still savours of the conviction that all future warfare will be of the concentrated western front type; and is in direct contrariety to our own conclusion that the machine-guns of even the smallest tactical formation, *e. g.* the Lewis gun of a platoon, must cover the advance of the riflemen at all times when possible, by direct or indirect fire. Secondly Captain Monod suggests that indirect fire was little used during the open warfare period in the last three months of the Great War: there is food for reflection here, since the same has been said by other British and continental authorities.

*Some reflections on the activity of the Swiss Air Force during mobilization (i. e. from 1914 to 1918). By 1st-Lieutenant Quinclet.*

Three pages of frank accusation of unpreparedness and inefficiency against the Swiss Government. After drawing attention to the tremendous air losses of the belligerents, which merely produced by national effort a steady increase in the actual number of machines in the field on all sides, the writer shews how in 1918 out of a total of only twentytwo aeroplanes which was all Switzerland possessed, only two were actually fit to take the air, and only three more could be made so with slight repair.

He attributes the constructional faults which caused this state of affairs to the centralisation of machine construction: the Swiss State factory was alone in the field, building against no healthy commercial competition, and it became slack in technique accordingly. Apparently the Swiss Air Force was not even allowed to have its own permanent inspector in the State works.

If his facts are true, and one can not presume otherwise after their publication in the *Revue Militaire Suisse*, they should give his Government furiously to think as to what their future arrangements in this respect are to be.

*Heart trouble amongst the troops of the belligerents (in the Great War). By Lieut-Colonel Girard.*

A brief review of an article with the same title in the "Revue Medicale de la Suisse Romande" by Dr. M. E. Thomas. After giving the percentages of these illnesses in relation to all others in the six Swiss Divisions, the writer points out that men are often lost to the combatant forces through faulty diagnoses made in a hurry. He advocates greater care in the medical examination of recruits ; since there is not only more leisure for the examination then, but it can be conducted when the initial fatigue of the recruits in their first military exercises affords a better chance of a correct diagnosis than examinations carried out later on.

*Chronicles and Reviews.*

The only point of special interest in these occurs in the Swiss chronicle, whose writer is of opinion that the Swiss military textbooks are based too much on German thought and methods, and that they should be brought more into line with those of other nations, especially France.

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## **REVUE MILITAIRE SUISSE DECEMBER 1920.**

*Physical training in Recruit Depots, by Professor E. Hartmann.*

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An examination of the Swiss national system of physical training and its effect upon the army. The writer supports the view that the physical training of recruits can only be satisfactorily prepared for by universal physical training between the ages of 7 and 20; and that recruits on enlistment should be most carefully examined as to their state of physical fitness and then drafted into the arm of the service for which they are best fitted bodily.

He mentions that Swiss laws already exist to compel a modicum of physical training between the ages of entering school and 14 years; but that fully 30% of the youths are able to avoid them, chiefly owing to the inertia or opposition of many of the Communes. From 14 to 16 years training is optional; and from 16 to 20 years of age there is a complete hiatus, which is regarded as most dangerous both to the future of the race and to the army. As regards the army in particular, the writer points out that one can not begin at 20 years the corporal training of men who have to be as physically fit as have soldiers; and he instances the experiences of the mobilization of 1914, when men on the march "fell out like flies".

In trusting that measures will be found to fill this gap (as well as to make training compulsory from 7 to 16) he hopes that detailed records will be kept of the physical progress of potential recruits during those years, to be carefully consulted at the time of enlistment. The French law, whereby conscripts found by the "conseils de revision" to be inferior in physique through circumstances under their own control are liable to be called up some months earlier than the rest of their class, is extolled as a pattern.

It is interesting to find this confession of partial failure in the case of a country whose physical training has usually been considered as above the average: and frank advocacy of national physical training is a somewhat new feature which may engage attention in many quarters hereafter; the responsible authorities of at least one of our own colonies have already voiced the necessity.

*Field Postal Service during the active service of 1914-8, by Colonel Chavannes.*

A short technical article, of little general interest.

*The strategy of small separate forces ("Strategie des petits paquets") by Colonel Feyler.*

A short study of one strategic aspect of the Great War which is worth translation.

( *Translation* ) :—

General Sarraïl had under his orders in Macedonia British, French, Russian, Italian, Servian, and Greek detachments. Consequently he was in direct relation with the Governments of all these nations:— governments whose political aims were not always in accord with his instructions from Allied headquarters in the west. On the strength of his experiences, which were not free from disappointments, he has stated that "Since I have had intimate acquaintance with a war of coalition, I feel less admiration for Napoleon the First".

His verdict permits at least of an interesting comparison. Consider first the highest tide of the Napoleonic era: the time of Austerlitz, Jena, and Friedland.

1805 saw the Emperor busy constituting his Grand Army in the Boulogne camp: opposite the shores of England, with the invasion of that country under consideration. The British Government, taking alarm, sought to divert the storm elsewhere. It sealed the third coalition with Austria and Russia: Bavaria remained the ally of France, Prussia bided its time and maintained its neutrality.

60,000 Austrians and 90,000 Russians were united under the command of the Archduke Ferdinand with Field-Marshal Mack as his chief of staff, to operate by way of the Danube valley. The Archduke Charles was at the head of 150,000 men in Venetia, where the principal effort of the Emperor was to be expected. The Archduke John, with 50,000 men in the Tyrol, maintained liaison between these two massed armies. Total allied forces then, 350,000.

Napoleons effectives were only 250,000 : but, determined to secure the victory in Germany, he sent only 50,000 men to Upper Italy to oppose the Archdukes Charles and John: leaving him with 200,000 men under his own command to deal with Ferdinand. With these, he turned his back on England, and set out for the Rhine. His own situation bettered as the Austrians, anxious to prevent Bavaria from joining him actively, decided to advance up the Danube without waiting for their Russian allies. They reached Ulm, where Mack was surrounded and forced to surrender. The Archduke Ferdinand's other commanders with their forces were put out of action at the same time: Ferdinand himself was alone able to escape, at the head of the only twelve squadrons left to him.

Napoleon thereupon continued his advance eastwards towards the Russian forces: they met at Austerlitz, and Russia in her turn was beaten in detail. In vain the Archduke Charles advanced from Italy: it was too late; Austria preferred not to risk another encounter, for it could only lead to the third detachment suffering defeat by weight of numbers, as had the other two before it. Austria therefore had to submit to the Peace of Presbourg (October 26th 1805).

At this stage Prussia took serious thought: fearing domination by Napoleon she took to arms to decide her fate: Jena and Auerstadt solved it for her on the 14th of October 1806 beyond hope of respite. The Prussian army, thrown into disorder and then cut to pieces in the course of an unrelenting pursuit of only a few days, disappeared from the coalition faster than had the Austrian army before it.

During these further actions, however, Russia had time to get her army together again. Her revival brought about the campaign in Eastern Prussia in 1807, a war in two acts. Eylau constituted the first act: a Napoleonic victory, but one gained at great effort, at great loss, and not a conclusive one. It still left the Russian Commander-in-Chief Bennigsen a hope of revenge. Friedland, on the 14th of June 1807, brought the second act to a close this last victory was decisive, and it destroyed the last hopes of the Russian high command and of the Third Coalition alike. The Peace of Tilsit imposed upon Russia and Prussia together a new political status; and confirmed the conditions forced upon Austria at the Peace of Presbourg.

To summarise: the military aspect of all the strategy of this three years' period is as follows:— with France, the strategy of the concentration of force; with the Allies that small separate forces. Although the combination of England Austria Prussia and Russia could dispose of an incontestable superiority of effectives; yet every battle save Eylau alone found its forces in numerical inferiority. Thus the group of nations suffered four defeats in detail, each of which was decisive to the fraction of its troops engaged: Austria at Ulm, Russia at Austerlitz, Prussia at Jena, Russia for the second time at Friedland; as a result of which the stronger power found its resources completely exhausted whereas the weaker one could still dispose of sufficient troops to impose its will.

Next, let us turn to the campaign in Macedonia during the period of strategy in 1915-1918.

In 1915 Austria, Germany and Bulgaria combined their forces against those of Serbia: 600,000 effectives against 250,000, more than twenty divisions against about a dozen. The Servians, who constituted the first separate force of the Allies, had no alternative to withdrawing from so unequal a combat and to reserving the strength of their army for more favourable times.

Certainly a second force came to her aid: four Anglo-French divisions landed at Salonika; but this measure of help was both tardy and insufficient, and General Sarrail who commanded it, had, like the Voivode Putnik, to fall back before greater numbers.

The 1916 campaign brought a third echelon of forces in aid: composed of the Servian army reconstituted but at half its original strength, another French division, two Brigades of Russians and three of Italians.

Great Britain also landed four further divisions; but, as her national strategy was limited to covering the port of Salonika and was opposed to any offensive action in the Balkans, these were only equipped as garrison troops, i. e. without transport.

Consequently during this year General Sarraill could only dispose of a dozen divisions for offensive operations: enough to drive back the German- Bulgar offensive in the Florina valley and to gain touch with the Moglena extreme south of Servia, but quite insufficient to destroy the enemy's effectives.

The year's fighting ended in the mutual exhaustion of the adversaries: each was still in a position to save their situation, but neither could pretend to more or hope to dispose of the enemy.

1917 brought a fourth addition of separate forces: a British division, four French ones, and the first units of the Greek Venezelist army; but the fighting value of these reinforcements was less than their figures would appear to indicate.

Fighting and sickness had produced greater wastage than the depots were able to replace: the French division had to abolish their fourth regiments to maintain the other three, even then battalion strength was down from 800 to 600 rifles.

Italy was primarily occupied with her effort in Albania, the Russian revolution had a disastrous influence upon the Russian contingent.

The single access of strength of real value lay in the Greek National Defence army corps, comprising the three divisions of Seres, Crete, and the Archipelago respectively.

On the other hand however, even as regards Greece, her royalist enterprises held the attention of the high command continually engaged, and distracted it from the business of battle.



At this time the court of Athens was at the height of its intrigues, its dispatches to and from Berlin, its secret preparations for mobilization, its relations with the gangs of Falkenhausem and Caravitis. So much was the effect of this in evidence, that once more the year's campaign brought no result of any kind. At the close of 1917 the battle front shewed no perceptible change since 1916: both adversaries remained poised at a standstill.

Behind the front, however, important events were in progress. The fifth echelon of separate forces, that which finally was able to guarantee the undertaking of decisive measures, was steadily being got ready: i. e. the Greek Army. Its formation was carried on methodically, without hasty excitement or confusion. The Government made its first task the restoration of civil internal order: for a solid edifice can not be built on ruined walls, the very ground must be prepared before the foundations are laid. A well ordered civil administration is essential to a sound military organisation.

The ground once cleared, executive measures were taken forthwith. Firstly the military classes of 1916 and 1917, left unenrolled under the old regime, were called up for military service. Next, the reservists were called in: to a more patriotic task than germanophile intrigues and street disorders. At the same time the stores and equipment which England and France had undertaken to supply were landed and classified in the military parks ready for the men who should use them. Side by side with this, the French Military Mission held its officers in readiness to direct the training of the men in the new developments of warfare: a task in which every effort made was fully recompensed by the keenness of the Greek soldiers and their leaders and by the spirit of camaraderie which reigned everywhere. The future was to witness the Greek divisions leaving one by one the camp at Narech, carefully equipped, intelligently trained, fully cognisant of the great task before them; and taking each their place in the sector of the front assigned to them.

The original programme contemplated an army of sixteen divisions in the field by the end of the summer of 1918. It was never able to be fully carried out: when the decisive attack was launched in September practically ten divisions were fully ready, the remainder being still in the process of formation. Behind the first line however, there were reserves available to replace all losses, and the territorial troops gave irreplaceable help in the immense material preparations for the offensive. It was this "fifth echelon" of ten Greek divisions which was the decisive reinforcement which made it possible for the high command to achieve what the four preceding forces had been unable to undertake during their dispersed action throughout three years of war.

I propose to leave open the question as to whether this dispersion of force could have been avoided, and whether a concentration of 150,000 to 200,000 men could not have been got together in the spring of 1915 to help the Servian army from the outset. To discuss that would be to touch upon one of the most delicate and most interesting problems of the whole European war; and we cannot hope for its solution until national political and military archives have been opened more to the public than they have been so far.

It does, however, seem certain that if such a strong concentration had been possible, the whole situation would have been widely changed. The least effect would have been to keep Bulgaria in suspense, and to render the help which the central Powers drew from Turkey precarious in a much shorter time. Let us imagine for a moment a Servian army unrestricted in its movement on the Danube and the Save, not only relieved of the detachments which it had to make to the Sofia road and to reinforce its army in Timok, but reinforced sufficiently to enable it to threaten Hungary without risking its communications: the strategic position then assumes a very different form from what it actually was.

In any case the question is of small importance to the present theme. Whether the initial conception was at fault, and

whether it there was a mistake made there were good excuses for it as seems probable, the fact remains that after the interval of a century, notwithstanding the changed conditions of warfare, the strategy of small separate forces had once more to yield before the strategy of concentration. Neither is it a matter for surprise. Nevertheless, the essential principles which govern the control of armies in the field are so easily lost sight of that it is always time well spent if the consequences of this forgetfulness are examined.

Fortunately, the comparison of Salonika with the Napoleonic period of 1805-7 can not be pursued to complete similarity. The German-Bulgarian combination was never able to draw the fullest advantage from the dissipation of the Allied forces. It could have done so in 1915 at General Sarraill's retreat to Salonika: at that moment the superiority of its forces was incontestable, and such as to allow it a free hand in directing to the southward the united forces of the Balkans with every prospect of victory; but, held back by political considerations, it elected to stay its hand and to do nothing. By this means, the strategy of small separate forces was able to repair its error in the long run: a very long one, in effect, and the whole of the European war was deeply influenced by its course.

This last remark leads to a further observation, in special regard to Greece. Now, in the light of the unfortunate trend of events on the Macedonian front, we are enabled to see more clearly how correct was the insight of M. Venizelos from the very first day of war in 1914. Compliance with the treaty with Servia guaranteed a concentration of force whose least effect must be the holding of Bulgaria in a position of suspense: possibly the mere mobilization of the Greek army would have sufficed to this end; and it was certainly ordered by M. Venizelos with that intent. Greece could thus, without violating its watchful neutrality, display its military strength within easy reinforcing distance of the Servian forces, which latter would thus be assured of liberty of action. Had it been necessary to pass

to active measures, and had any Allied support appeared desirable, a mere fraction of Allied troops would have proved equal to the work, probably something even less than the four divisions of General Sarrail.

At the same time, is it permissible to lay down that in military application no one must ever deviate from principles and that every operation must be subordinated to the integral concentration of all one's resources? To do so would be to pass over some excellent lessons from history, which shew us that science is not quite everything, that skill ("art") too must play its part in the decisions of a commander, that happy intuitions also will sometimes bring him success; and that even where correct reasoning is allowed to preclude the utilisation of intuition, excellent opportunities will be lost through lack of daring.

At the commencement of the European war, both adversaries "stuck to the rules" on the western front. The Germans, before commencing their move, concentrated on the French and Belgian frontiers almost the whole of their forces. They left only an indispensable minimum to deal with Russia; and, if they made a mistake, it was in not sticking to the rules long enough. General Joffre also stuck to the rules. Although he was extremely anxious to come to the aid of Belgium, yet he defeated the movement order of his left wing until he could count the effective co-operation of the British forces. One may even ask whether, in still further deference to the rules, he would not have done better to withhold the sweep of General Sordet in Belgium: a sweep whose chief effect appears to have been the premature tiring out of Sordet's cavalry force.

As for Russia, she came into action before her armies had been properly concentrated. Are we to say that this was an error? Possibly, if one limits consideration to the eastern front. Still, if we take into consideration the whole of the theatres of war together, we are forced to admit that the possibility of an Allied victory on the western front over the bulk of the enemy

armies outweighed all other considerations to such an extent, that no action which could further this aim could be left undone. The Russian advance, possibly premature as regards the army of Russia herself, was certainly not so in respect of the common interests of the Allies.

Furthermore, it must be observed that the defeat of Samsonoff at Tannenberg and that of Rennenkampf in the Masurian lakes were neither of them due to numerical inferiority. It lay only with the commanders that a signal victory was not gained instead. Had Rennenkampf, whose divisions were opposed by a single Army Corps, made but a short advance further forward, the Germans would have been left with no choice but between defeat or refusal to accept battle.

From this last example, one concludes that for victory it is not the greatest possible concentration that is necessary, but the minimum concentration which will suffice for the work in hand. The skill of the commander comes in in appreciating the precise moment at which this minimum has been secured; and in deciding whether it is more to his advantage to rest content with it so as to engage in battle without further loss of time, or whether he should delay action so as to collect still more force to his hand.

It was in this situation that General Cadorna found himself at the beginning of the war: and we know how he set about arranging his forces. The Italian communiques gave one the impression that their staff work was a pattern for all time, a positive school of war. Yet the fact remains that in the face of their principal concentration the Austrians were weak in number at the commencement of hostilities: a violent attack utilising only the first forces ready, not numerous but still sufficient, would perhaps have produced a more rapid effect.

However that may be, one thing remains certain; which is that the strategy of small separated forces thrown in successively is always a mistake. Such strategy exposes the commander who employs it, not only to defeat by an adversary who concentrates

all his resources, but also by one who realises that a certain minimum of his troops will be sufficient to assure him superiority.

*(End of translation).*

The foregoing article has been reproduced in full as of exceptional interest as a modern strategical study by a well known authority. The remainder of the month's issue contains nothing of special interest.

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# *Journal*

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The Committee do not undertake to authorise the publication of such papers as are accepted, in the order in which they may have been received.

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3. The reading-room of the Institution is provided with all the leading newspapers, magazines, and journals of military interest that are published.
4. There is a well-stocked library in the Institution, from which members can obtain books on loan, free. Suggestions for new books are solicited, and will be submitted to the Committee. Books are sent out to members V. P. for the postage, or bearing by railway.
5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in India and to all life members; but ordinary members wishing to have their journals sent to any address out of India must pay in advance Re. 1 per annum to cover foreign postage charges.
6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found on the opposite page.
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## United Service Institution of India.

JULY 1921.

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**SECRETARY'S NOTES.**

### I.—New Members.

The following new members joined the Institution from 1st March 1921 to 31st May 1921.

### LIFE MEMBERS.

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Capt. E. Wood.

Capt. C. M. Ingoldby.

**Capt. A. Veitch.**

**Capt. R. S. Phillips.**

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## II.—Examinations.

Books on Military History and Languages with Dictionaries are available in the Library and the following books which may be found useful for reference by officers, studying for promotion examinations or entrance to the Staff College have been placed in the Library of the U. S. I. and are available for use by members.

## IMPERIAL MILITARY GEOGRAPHY.

**Imperial Defence. - By Lt.-Colonel E. S. May.**

**Outlines of Military Geography. By MacDonnell.**

**Imperial Strategy.** By Lt.-Colonel Repington.

**Military Geography. By Macquire.**

**Introduction to Military Geography.** By General E. S. May.

**War and the Empire.** By Hubert Foster,

**MILITARY HISTORY. (SPECIAL PERIOD.)*****The Campaign of the British Army in France and Belgium up to 20th November 1914.***

Sir John French's Despatches.

Forty Days in 1914. By Major-General Maurice.

"1914." By Viscount French.

General Sketch of the European War. By Bellock.

The British Campaign in France, and Flanders, 1914. By A. Conan Doyle.

Nelson's History of the War.

Ypres. By the German General Staff.

Oxford Pamphlets. "August 1914. The Coming of the War." By Spenser Wilkinson.

Oxford Pamphlets 1914. No. VII.

" " " No. X.

The Times Documentary History of the War, Vol. V, Military, Part I and Vol. VIII, Military, Part II.

Der Grosse Krieg. The Schlacht bei Mons (Grossen General-Stabes.)

Der Grosse Krieg. The Schlacht bei Mons Longwy (Grossen General-Stabes.)

---

***Development and Constitution of the British Empire.***

Historical Geography of the British Empire. By Hereford George.

Our Fighting Services. By Sir Evelyn Wood, v.c.

The Statesman's Year Book.

LUCAS, Sir C. P. The Beginnings of English Overseas Enterprise, 1917

MILLS, J. Saxon. The Future of the Empire, 1918.

POLLARD, A. F. The British Empire, 1909.

LUCAS, Sir C. P. The British Empire (6 lectures). 1918.

WILLIAMSON, J. A. The Foundation and Growth of the British Empire 1918.

WOODWARD, W. H. The Expansion of the British Empire, 1907.

LUCAS, Sir P. C. Historical Geography of the British Colonies (Dominions). 7 Volumes. 1906-17.

Vol. 1—Mediterranean.

Vol. 2—West Indies.

Vol. 3—West Africa.

Vol. 4—South Africa.

Vol. 5—Canada.

Vol. 6—Australia.

Vol. 7—India.

## ***Secretary's Notes.***

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- KNIGHT, E. F. Oversea Britian, 1907.
- MACKINDER, H. J. Britian and the British Seas, 1907.
- EGERTON, H. E. The Origin and Growth of the English Colonies and of their system of Government, 1903.
- JENKS, E. The Government of the British Empire, 1918.
- JENKS, E. A Short History of Politics, 1900.
- DICKEY, A. V. Introduction to the Study of the Law of the Constitution, 1908.
- BAGEHOT, W. The English Constitution, 1909.
- SKELEY, Sir J. The Expansion of England, 1883.
- LOWELL, A. Lawrence. The Government of England, 1912.
- LYALL, Sir A. C. The Rise and Expansion of the British Dominion in India, 1894.
- HUNTER, Sir W.W. A Brief History of the Indian Peoples, 1907.
- FORTESCUE, Hon. J.W. A History of the British Army, 8 Vols. 1899-1917. (In progress).
- CORBETT, Sir Jaulian. England in the Seven Years War, 1907.
- MAHAN, Rear-Adm. A. T. The Influence of Sea Power Upon History 1890.
- FROUDE, J. A. The English in the West Indies, 1888.
- GRANT, W. L. History of Canada.
- BRADLEY, A. G. The Making of Canada, 1908.
- WILSON, B. Nova Scotia, 1911.
- LUCAS, Sir C. P. Report on British North America. By Lord Durham.
- HOGARTH, Prof. W. G. The Nearer East, 1902.
- BRAND, R. H. The Union South Africa, 1909.
- KELTIE, J. Scott. The Partition of Africa, 1909.
- CROMER, Lord. Modern Egypt, 1908.
- CAMERON, D. A. Egypt in the Nineteenth Century, 1898.
- COLQUHOUN, A. R. The Mastery of the Pacific, 1902.
- SCOTT Ernest. Short History of Australia.
- LORD, Walter, F. The Lost Possessions of England, 1896.
- JENKS, E. A History of the Australasian Colonies, 1912.
- FAWCETT, C. B. Frontiers, 1918.
- KRITH, A. B. Selected Speeches and Documents on British Colonial Policy. 2 Volumes, 1918.

Colonial Office List.

Whitaker's Almanack.

**III.—Payment for Articles in the Journal.**

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 400 is awarded for articles and reviews published in each Quarterly Journal.

**IV.—Contributions to the Journal.**

With reference to Army Regulations, India, Volume II, paragraph 487, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Institution of India are informed, that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee. Contributors are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

Contributors must have their articles either typed or printed.

2. It has been decided to introduce two new items in the Journal headed—

- i. Criticisms
- ii. Notes on current Military and Naval questions.

The rules for (i) to be—

That the criticism should be headed with the title of the article criticised, and the date of the Journal in which published.

That criticisms should be signed with a nom-de-plume, but that critics must disclose their identity to the Secretary.

- The rules for (ii) to be the same as for Articles.

**V.—Library Catalogue.**

The library catalogue revised up to 1st January 1916 is now available. Price Rs. 2 or Rs. 2-4-0 per V. P. P. A list of books received each year is published with the January Journal.

**VI.—Gold Medal Prize Essay 1920-21.**

For subject and conditions please see page IV.

**VII.—Army List Pages.**

The U. S. I. is prepared to supply members and units with manuscript or typewritten copies of Indian Army List pages, at the following rates:—

- Manuscript, per page Re. 1.
- Typewritten, per page Rs. 2.

## **Secretary's Notes.**

### **VIII.—Books.**

#### *Books Purchased.*

<i>Title.</i>	<i>Sec. &amp; No.</i>	<i>Author.</i>
Regimental Records of the Royal Welch Fusiliers 23rd Regt. ...	0-212 ...	Compiled by Carey and McCane.
An Introduction to Social Psychology ...	N-499 ...	W. McDougall.
The Road to Endor ...	K-219 ...	Lt. E. H. Jones.
The Inland Water Transport in Mesopotamia ...	M-968 ...	Compiled by Lt. Col. L. J. Hall and Br. Genl. R. Hughes.
Education and the Army (an essay in reconstruction) ...	K-220 ...	Col. Lord Corell.
The Indian Year Book 1921 ...	Ref. Sec....	Sir S. Reed.
	Q.	

#### *Books Presented.*

A Peep into the Early History of India ...	...	Dr. Sir R.G. Bhandarker.
(D. B. Taraporevala Sons & Co., Bombay) ...	...	
Songs of War and Patriotism (Longmans Green & Co. London)		Knight Hallows.
The New Race of Devils (Anglo Eastern Publication Co. London)	K-218 ...	J. Bernard.
Year Book of Wireless Telegraphy 1921 (Marconi Co.) ...	Ref. Sec....	Marconi.
	Q.	

#### *Books Ordered.*

Allenbys Despatches (16th Decr. 1917 period) ...	...	
Naval and Military Despatches Part VIII ...	...	
British Campaigns in the Nearer East, Vol. II ...	...	Edmund Dane.
How Jerusalem was Won ...	...	W. T. Massey.
Kearsons Mental Philosophy ...	...	
The Group spirit ...	...	

## MILITARY WIDOWS' FUND, BRITISH SERVICE.

The Military Widows' Fund, British Service, was established in India in 1820 to alleviate the distress of families of officers of the British Service *serving in India*, and to enable them to return to England without unnecessary delay. Whenever an officer of the British Service, who is a subscriber to the Fund, dies, his family receives at once the following assistance, namely:—

Six months maintenance allowance ranging from Rs. 2,400 to Rs. 3,600 according to the rate subscribed, plus Rs. 1,500 as a donation for the widow, plus Rs. 500 or Rs. 300 as a donation for each child according to whether the child is over 12 and under 21 years of age or under 12 years of age.

These benefits are secured by a small subscription of Rs. 4. 3 or 2 per mensem, which is regulated by the amount of pay an officer draws. An officer, on becoming a subscriber, secures for his wife and children quite irrespective of his length of service in India, the full benefits of the Fund in case of his death after having subscribed for fully three months. In the event of an officer dying within that period, his case is specially considered by the Committee of General Management.

Copies of the regulations of the Fund and other particulars relating thereto can be obtained from the Secretary at Simla.



# United Service Institution of India.

## GOLD MEDAL ESSAY COMPETITION 1920-21.

The Council have chosen as the subject for the Gold Medal Essay for 1920-21 the following:—

### INDIA AND THE NEXT WAR.

The following are the conditions of the competition:—

- (1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army, and Royal Air Force or Indian Defence Force who are members of the U. S. I. of India.
- (2) Essays must be printed or type-written and submitted in *triplicate*.
- (3) When a reference is made to any work, the title of such work is to be quoted.
- (4) Essays are to be *strictly anonymous*. Each must have a motto, and enclosed with the essay there should be sent a *sealed* envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1921.
- (6) Essays will be submitted for adjudication to 3 Judges chosen by the Council. When the decisions of the 3 Judges are received the Committee will submit the four essays, placed first in order by the Judges, with their recommendations on the award of the Gold Medal to the Council, who will decide whether the Medal is to be awarded and whether the essay may be published.
- (7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1921.
- (8) All essays submitted are to become the property of the United Service Institution of India, *absolutely* and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (9) Essays should not exceed about 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

By order of the Council,

SIMLA, }

F. A. FINNIS, LIEUT.-COL.,

30th Sept. 1920. }

Secretary, U. S. I. of India.

# United Service Institution of India.

## PRIZE ESSAY GOLD MEDALLISTS.

*(With rank of Officers at the date of the Essay).*

- 1872...ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.  
1873...COLQUHOUN, Capt. J. A. S., R.A.  
1874...COLQUHOUN, Capt. J. A. S., R.A.  
1879...ST. JOHN, Maj. O. B. C., R.E.  
1880...BARROW, Lieut. E. G., 7th Bengal Infantry.  
1882...MASON, Lieut. A. H., R.E.  
1883...COLLEN, Maj. E. H. H., S.C.  
1884...BARROW, Capt. E. G., 7th Bengal Infantry.  
1887...YATE, Lieut. A. C., 27th Baluch Infantry.  
1888...MAUDE, Capt. F. N., R.E.  
    YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).  
1889...DUFF, Capt. B., 9th Bengal Infantry.  
1890...MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Contingent  
1891...CARDEW, Lieut. F. G., 10th Bengal Lancers.  
1893...BULLOCK, Maj. G. M., Devonshire Regiment.  
1894...CARTER, Capt. F. C., Northumberland Fusiliers.  
1895...NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.  
1896...BINGLEY, Capt. A. H., 7th Bengal Infantry.  
1897...NAPIER, Capt. G. S. F. Oxfordshire Light Infantry.  
1898...MULLALLY, Maj. H., R.E.  
    CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).  
1899...NEVILLE, Col. J. P. C., S.C.  
1900...THULLIER, Capt. H. F., R.E.  
    LURBOCK, Capt. G., R.E., (specially awarded a silver medal)  
1901...RANKEN, Lieut.-Col. G. P., 46th Punjab Infantry.  
1902...TURNER, Capt. H. H. F., 2nd Bengal Lancers.  
1903...HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.  
    BOND, Capt. R.F.G., R.E., (specially awarded a silver medal)  
1904...MACMUNN, Maj. G. F., D.S.O., R.F.A.  
1905...COCKERILL, Maj. G. K., Royal Warwickshire Regiment.  
1907...WOOD, Maj. E. J. M., 99th Deccan Infantry.  
1908...JEUDWINE, Maj. H. S., R.A.  
1909...MOLYNEUX, Maj. E. M.J., D.S.O., 12th Cavalry.  
    ELSMIE, Maj. A. M. S., 56th Rifles, F. F., (specially awarded a silver medal).  
1911...Mr. D. PETRIE, M.A., Punjab Police.  
1912...CARTER, Major B. C., The King's Regiment.  
1913...THOMSON, Major A.G., 58th Vaughan's Rifles (F.F.)  
1914...BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs, (F.F.)  
    NORMAN, Major C. L., M.V.O., Q.V.O., Corps of Guides  
    (specially awarded a Silver medal).  
1915...No award.  
1916...CRUM, Major W.E., V.D., Calcutta Light Horse.  
1917...BLAKER, Major W.F., R.F.A.  
1918...GOMPERTZ, Capt. A.V., M. C., R.E.  
1919...GOMPERTZ, Capt. M.L.A., 108th Infantry,  
1920...KEEN, Lt.-Col. F.S., D.S.O., 2/15 Sikhs.

## MACGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June:—

(a) For officers—British or Indian | silver medal.

(b) For soldiers—British or Indian—a silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief as Vice-Patron, and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.\*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.

### Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

### MacGregor Memorial Medallists.

*(With rank of Officers at the date of the Award).*

1889...BELL, Col. M.S., V.C., R.E. (specially awarded a gold medal).

1890...YOUNGHUSBAND, Capt. F.E., King's Dragoon Guards.

1891...SAWYER, Major H. A., 45th Sikhs.

RAMZAN KHAN, Havildar, 3rd Sikhs.

1892...VAUGHAN, Capt. H. B., 7th Bengal Infantry.

JAGGAT SINGH, Havildar, 19th Punjab Infantry.

1893...BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).

FAZALDAD KHAN, Dafadar, 17th Bengal Cavalry.

1894...O'SULLIVAN, Major G. H. W., R.E.

MULL SINGH, Sowar, 6th Bengal Cavalry.

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\*N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves; also those serving in Auxiliary Forces, such as the Volunteers and Corps under Local Governments. Frontier Militia Levies and military Police, also all ranks serving in the Imperial Service Troops.

### MacGregor Memorial Medallists—*contd.*

- 1895...DAVIES, Capt. H. R., Oxfordshire Light Infantry.  
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896...COCKERILL, Lieut. G. K., 28th Punjab Infantry.  
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897...SWYAYNE, Capt. E. J. E., 16th Rajput Infantry.  
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898...WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.  
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 899...DOUGLAS, Capt. J. A., 2nd Bengal Lancers.  
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900...WINGATE, Capt. A. W. S., 14th Bengal Lancers.  
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901...BURTON, Major E. B., 17th Bengal Lancers.  
SUNDAR SINGH, Colour Havildar, 31st Burma Infantry.
- 1902...RAY, Capt. M. R. E., 7th Rajput Infantry.  
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903...MANIFOLD, Lieut.-Colonel C. C., I.M.S.  
GHULAM HUSSAIN Lance-Dafadar, Q. O. Corps of Guidesa
- 1904...FRASER, Capt. J. D., R.G.A.  
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905...RENNICK, Major F., 40th Pathans, (specially awarded  
gold medal).  
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906...SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.  
GHAFUR SHAH, Lance-Naik, Q.O. Corps of Guides Infantry.
- 1907...NANGLE, Capt. M. C., 92nd Punjabis.  
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908...GIBBON, Capt. C. M., Royal Irish Fusiliers.  
MALANG, Havildar, 56th Punjabi Rifles.
- 1909...MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910...SYKES, Major P. M., c.m.g., late 2nd Dragoon Guards.  
(specially awarded a gold medal).  
TURNER, Capt. F. G., R.E.  
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911 . LEACHMAN, Capt. G. E., The Royal Sussex Regiment.  
GURMUKH SINGH, Jemadar, 93rd Burma Infantry.

### **MacGregor Memorial Medallists—Contd.**

- 1912...PRITCHARD, Capt. B.E.A. 83rd Wallahjabad Light Infantry  
(specially awarded a gold medal).  
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.  
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913...ABBAY, Capt. B. N , 27th Light Cavalry.  
SIRDAR KHAN, Sowar, 39th (K.G.O.) Central India Horse.  
WARATONG, Havildar, Burma Military Police (specially  
awarded a silver medal .
- 1914...BAILEY, Capt. F. M., I.A. (Political Dept.)  
MORSHEAD, Capt. H. T., R.E.  
HAIDAR ALI, Naick, 106th Hazara Pioneers.
- 1915,. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.  
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916...ABDUR RAHMAN, NAIK, 21st Punjabis.  
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.)  
(Specially awarded a Silver Medal).
- 1917...MAIN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918...NOEL, Capt. E. W. C., Political Department.
- 1919...KERLING, Lt.-Col. E. H., M.C., R.E.  
ALLA SA, Jamadar, N. F. Frontier Corps.
- 1920.. BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.  
AWAL NUR, C. Qm. Havildar, 2nd Bn. Q. V. O. Corps of  
Guides. (Special gratuity of Rs. 200.)



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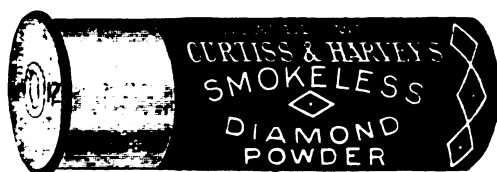


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# The Journal

OF THE

## United Service Institution of India.

Vol. LI.

JULY 1921.

No. 224

### THE MUTINY DAY BY DAY.

BEING

EXTRACTS FROM THE LETTERS

OF

GENERAL SIR ARCHDALE WILSON, G. C. B

TO HIS WIFE:

EDITED BY COL. H. R. NEVILL, C.I.E., O.B.E., I.C.S.

PART V.

*The Assault on Delhi.*

CXIV.

*Camp before Delhi,*

*5th Sept 1857, 12 noon.*

Pandies remain pretty quiet, but I regret to say Cholera is again shewing itself in Camp. I was in hopes we had lost it, as for 3 days we had no new cases. We are busy preparing for the final struggle, and my work is almost more than I can carry through. I get so exhausted and my head so confused that I at times almost despair. It is made worse by my not sleeping well at night. I get dreadful cramps in my feet and legs. I have this moment received the report of young Somerville's death. The poor boy got fever and being of a sickly constitution and no stamina, could not bear up against it. This will be a sad blow for Hethwaite. All his favourites have been suddenly cut off.

\* \* \* \* \*

Will you send this on to Hethwaite? I know no other route by which a letter can reach him.

NOTE.—The amount of preparation required for active siege operations was immense. The heavy guns had been brought to Delhi by elephants, and the first step was to fit them all for bullock draught, as it would have been dangerous, if not impossible, to take elephants within range of the walls. Materials had to be collected for the breaching batteries and the magnitude of the task may be estimated from the fact that for transporting them to a single battery 1500 camels were required. When work began, it would have to be pushed to completion without delay. The successful execution of the scheme demanded a standard of departmental organisation which was not attained in practice. There was an abundance of zeal but, a lack of experience and a tendency to rush matters, with results that Wilson deplored.

### ***The Mutiny day by day.***

The weather too was at its worst. Some fifty per cent. of the European troops were in hospital, and the labours entailed on the remainder were exhausting. So far the actual work undertaken was the completion of the "Sammy House" battery connected with the temple so designated by a trench. This was armed with four 9-pounders and two 24-pounder howitzers the intention being thereby to keep down the fire from the Mori Bastion and to protect the breaching batteries from flank attacks in the shape of sorties from the Kabul and Lahore Gates of the city. The guns were placed in position on the following day, and the battery was taken over by Captain Remington.

Lieutenant Somerville of the Artillery had served under Wilson at Meerut.

CXV.

*Camp before Delhi,  
6th Sept 57, 2 p. m.*

No dew of any kind to-day. I don't know why as we have had no rain. I wish we could get a heavy fall to cool the air, for it is very hot the last three or four days, and it might stop the fever now so prevalent in Camp. Campbell marched in this morning with Rifles and Artillery men from Meerut, all well except a little footsore.

Not a word of news in Camp, and all very quiet—the quiet before a storm.

This is a very shabby note to send, but my head is so full of other things that I really can't write.

NOTE.—Wilson, who cut a poor figure with his pen, had this day more writing than he could endure. He had composed and written a General Orders which was read at the head of each brigade on the following day. This document, in every way characteristic of the man, produced a great impression, not only on the force, but on the public in England and in India. It runs as follows :—

*G. O. Camp before Delhi,  
Sept. 6th 1857.*

The Force assembled before Delhi, has had much hardship and fatigue to undergo since its arrival in the Camp, all of which has been most cheerfully borne by Officers and men. The time is now drawing near when the Major General commanding the Force trusts that their labours will be over, and they will be rewarded by the capture of the City for all their past exertions, and for a cheerful endurance of yet greater fatigue and exposure.

### ***The Mutiny day by day.***

3

The Troops will now be required to aid and assist the Engineers in the erection of Batteries and Trenches, and in daily exposure to the sun as covering parties. The Artillery will have even harder work than they yet have had, and which they have done so well and cheerfully performed hitherto ; this however will be for a short period only, and when ordered to the assault, the Major General feels assured British pluck and determination will carry everything before them, and that the bloodthirsty and murderous mutineers against whom they are fighting will be driven headlong out of their stronghold or be exterminated. But to enable them to do this, he warns the Troops of the absolute necessity of their keeping together, and not straggling from their columns. By this only can success be secured.

Major General Wilson need hardly remind the Troops of the cruel murders committed on their Officers and comrades, as well as their wives and children, to move them in the deadly struggle. No quarter should be given to the Mutineers. At the same time, for the sake of humanity, and the honour of the country they belong to, he calls upon them to spare all women and children that may come in their way. It is so imperative, not only for their own safety, but for the success of the assault, that men should not straggle from their columns, that the Major General feels it his duty to direct all commanding Officers to impress this strictly upon their men, and he is confident that, after this warning, the mens' good sense and discipline will induce them to obey their Officers and keep steady to their duty. It is to be explained to every Regiment that indiscriminate plunder will not be allowed: that prize agents have been appointed, by whom all captured property will be collected and sold, to be divided according to the rules and regulations on this head, fairly among all men engaged, and that any man found guilty of having concealed captured property, will be made to restore it, and will forfeit all claim to the general prize: he will also be likely to be made over to the Provost-Marshal to be summarily dealt with.

### ***The Mutiny day by day.***

The Major General calls upon the Officers of the Force to lend their zealous and efficient co-operation in the erection of the works of the siege now about to be commenced. He looks especially to the Regimental Officers of all grades, to impress upon their men, that to work in the trenches during a siege is as necessary and honourable as to fight in the ranks during a battle. He will hold all Officers responsible for their utmost being done to carry out the directions of the Engineers, and he confidently trusts that all will exhibit a healthy and hearty spirit of emulation and zeal, from which he has no doubt that the happiest results will follow, in the brilliant termination of all their labours.

A. WILSON,

*Major General.*

This order displays much prescience. The dangers he foresaw so clearly were real enough to bring the assault, when once the walls had been crossed, within an ace of disaster. The whole force was strongly imbued with the expectation of plunder, and though the capacity of the rebel sepoys for the art of looting was not forgotten, yet the riches of Delhi were tempting in the extreme to officers and men. His order as to straggling was but partially effective. He had not foreseen a fact, in the abundant stores of strong drink within easy reach of the Cashmere Gate, which nearly brought about failure. In one respect, however, the order, to the eternal credit of the force, was obeyed to the letter. At a dinner subsequently given in his honour at the Oriental Club the General said:—

Gentlemen, I am proud as I well may be, of having successfully commanded the gallant band which first turned the tide of the Mutiny, and I am prouder still to find that my humble Services have not only been approved by my Sovereign, and by the Honourable Court of Directors of the East India Company, but I think I may also add by all ranks of my fellow countrymen. But fortunate as I have been in this respect, I must say that whatever credit may be due to myself must be equally shared by that small but gallant force which I had the honour to command. The force for four months of the most trying and unhealthy season of the year endured such fatigue and exposure as were probably never known by soldiers before: and

although they were reduced daily in numbers by the continual attacks which they had to repel, and though one third of their available strength was paralysed by sickness, yet they bore every hardship with the greatest patience, and the only difficulty was to restrain their ardour till the moment arrived when they could be let loose on the enemy with some chance of success. Not the least noble part of their conduct, in my opinion, was that, though flushed with victory and their blood roused to the highest pitch, they still obeyed the call that was made upon them, and not a single woman or child was ill used or ill treated either by a European or a Native soldier belonging to our force. It has been stated in the public prints, and also I am told, in Parliament, that such was not the case, and that women had actually been recklessly murdered. That I most emphatically deny. Not a single instance, I repeat, of any woman or child having been ill treated ever came to my knowledge, and I took particular pains to enquire into the matter.

Whatever happened elsewhere, the word of General Wilson as to Delhi may be accepted. He was too honest to conceal the truth or to acquiesce in its concealment. The rebels knew well enough that the British troops could be trusted to obey the orders given in this matter, and during the long period of street fighting they frequently covered their retreat by means of women and children, in the certain knowledge that the fire of our troops would be withheld. The sincerity of Archdale Wilson was accepted without question. In a public lecture in London Lord Shaftesbury thus commented on the General Order:—

“Look what has been done by a Military Officer, as you may read in the *Times* of yesterday. Read the General Order of that noble soldier and gallant Christian, Major General Wilson, to whom was confided the honour of directing the attack on the devoted City of Delhi. Mark his words.”

[Then follows an extract from the order, regarding the treatment of non-combatants.]

“I confess that when I read that General Order I was almost moved to tears in deep thankfulness to Almighty God that he had raised up such a man, and put such sentiments

## ***The Mutiny day by day.***

into his heart upon such an occasion; and I did also rejoice that those noble fellows under his command, notwithstanding their exasperation, notwithstanding the fury of the assault, listened to his request. They repudiated with horror the precedent set them by the heathen, they spared the innocent women and children, and I call upon you to thank God and rejoice with me that you and I are fellow citizens with such glorious soldiers and such brave men."

Sir Edward Campbell brought with him some 400 men, mainly of the 60th Rifles, but about 100 were Artillerymen, and were sorely needed. The same day a wing of the Biluch Battation reached the camp, brought in with detachments of the King's, and the 4th Punjab (Wilde's) infantry arrived on the 7th. The Meerut reinforcements were given a great welcome and were played into camp by the band of the 52nd.

### CXVI.

*Camp before Delhi,*

*7th Sept. 57. 12 noon.*

You will have to put up with very small scraps for some days. I shall be too busy for writing. The weather is frightfully hot, and I feel it very much. I had something I wished to say to you but so much work has come in, it has quite escaped me. It is now 4 p. m.

God bless and protect you.

**NOTE.**—The amount of personal attention to detail demanded of Wilson at this period is illustrated by this brief letter, written in the course of four hours during the hottest part of the day. The Artillery Park he could safely entrust to the care of Colonel Hogge, but what occasioned him concern was the mass of materials collected for the batteries which had to be sorted for distribution to the various positions: a task which was never completed to his satisfaction. The plan of attack was worked out in detail, and instructions were given personally to the brigade commanders. The command of the troops engaged during the bombardment was entrusted to Nicholson, under whom were two main columns, that on the left under Edward Greathed and that on the right under Reid, these two officers being detailed to superintend the forces employed in the trenches till the actual assault.

On the evening of the 7th the plan of attack, which had been drawn up by Baird Smith, largely under the advice of Alexander Taylor, and had been carefully considered and revised by the General on the previous day, was put into operation. In order to satisfy himself thoroughly, Wilson sent Nicholson with Taylor to make a personal reconnoissance of the ground, and this was carried out during the night. Nicholson reported favourably on the scheme, to which Wilson gave his final approval.

The main idea was to muster an overwhelming force of artillery against the weakest spot in the defences, and this was the stretch of fortified wall from the Cashmere Bastion to the river front. Supplementary to this was an attack on the Mori Bastion, which required to be silenced before the decisive assault could be made at the weaker point near the Cashmere Gate.

After dark on the 7th the right battery, known as No. 1, was traced by Taylor and Medley. This was in two sections, some 650 yards from the Mori Bastion; the right section in the north-west corner of the present police lines, and the left near the Judge's bungalow. The right section under Major Campbell was intended to silence the Mori Bastion, and the left, under Major Kaye, to keep down the fire of the Cashmere Bastion; the whole being under the command of Major Brind, afterwards General Sir James Brind, K. C. B. The right section was armed with five 18-prs, and one 8-in howitzer, while the left held four 24-pounders.

As soon as the two officers and their six sappers had marked out the battery, a covering party of Gurkhas was brought up, and then the camels with fascines and gabions followed. Work was pushed on with the greatest energy and by the morning both sections were completed and armed, and connected by trenches with one another and with a ravine behind which formed a valuable protection for the supports. The construction of the battery was not wholly uninterrupted, as the enemy opened fire with grape on the workers; but their attention was diverted by Remington, who from his battery maintained a constant fire on the Mori Bastion.

On the 7th the position had been advanced in another direction. Ludlow Castle and the Qudsia Bagh had been seized without opposition, and strong picquets were posted in each, forming important points d'appui for the left attack. It is supposed that the rebels expected the assault from the direction of Kishanganj on the right of the British position, and this miscalculation proved of the greatest benefit to the besiegers, though it accounted for the unexpected resistance encountered on that flank.

## CXVII

*Camp before Delhi,*

*8th Sept. 1857. 1 p.m.*

We opened our first battery this morning, but not as favourably as I could have wished. The Engineers had not

## *The Mutiny day by day.*

completed it, and we could only get half the Guns into play. It is fearful weather this for our men to work in all day long. I fear I shall lose a number by sunstroke, and sheer fatigue. Excitement may keep them up for a time. We lost one Officer shortly after opening the Battery—Hildebrand. No other news.

NOTE.—During the course of the next few days Wilson learned that it was one thing for the enthusiastic Engineers to promise, but that it was quite another thing for them to perform difficult tasks demanding almost superhuman energy under the most trying conditions within the scheduled time. This irritated him greatly, and he would have been wiser to discount expectations to some extent. The opening of the battery was a most exciting affair. When morning broke, only one gun was in position, and the rebels immediately bombarded the new battery with every available piece. Brind hastily dragged up a howitzer and replied with vigour, but the enemy organised a sortie from the Lahore Gate with the object of taking the battery, in flank. This attempt was frustrated by the covering party and by Remington with his light guns, and the raiders were driven back discomfited. By dint of incessant work one platform after another was completed and in the course of the day six guns were in action. Brind directed all his fire on the Mori Bastion and by the afternoon had silenced it completely. The enemy with great courage replaced the disabled guns again and again, but their defences had been destroyed and the Bastion was rendered practically harmless till the actual assault.

On the morning of the 8th Wilson rode out to meet the Jammu Contingent, some 2000 men, with 4 brass guns and a number of small swivel guns mounted on camels. They were mostly Sikhs and Dogras, but their uniform and equipment were strangely varied and the music of their bands created great amusement in the camp. They were stationed on the right flank, and were not employed till the day of the assault, when they proved more picturesque than useful.

Lieutenant E. H. Hildebrand of the Artillery and Lieutenant C. B. Bannerman of the Biluch Battalion were killed during the defence of Brind's battery, and some 14 men were killed or wounded.

## CXVIII

*Camp before Delhi,*

*9th Sept. 57. 2 p.m.*

Our Battery No. 1 did very well yesterday, and is doing better to-day. The Parapet of the Moree Bastion is pretty well demolished. I am sorry to say that Nos. 2 & 3 which were



to have been finished last night, and opened this morning, are not so, one not having been traced out, and the other not half finished. One of them will I trust be ready to-night, the other is postponed till the night after. The fact is my Engineers although very zealous have little or no experience, and attempted to perform more in a certain time than was possible with the means at their disposal. There is also a sad want of arrangement among them. I told them all this before we commenced, but they would not believe me. Fortunately there is no great harm done beyond loss of time. I shall not be able to take Delhi on the 11th, as I wished to do !! That is all. I have just had Baird Smith here, and from him I understand there will be still more delay. He and I do not agree at all. He proposes the most impracticable plans, which he cannot possibly carry out, has no method or arrangement or apparently any control over his Officers and men. The consequence is not half the work he proposes to do is finished, and what is so, is so imperfectly done, that the Artillery suffer. We lost 20 men yesterday solely from the imperfect protection given to the men in the Batteries. He is also stubborn and impracticable, and a very disagreeable man to deal with. I have constantly to find fault with neglect in his Dept. Instead of correcting it, he sulks. You can have no idea of the difficulties I have to contend with, It is making me irritable and crabbed.

NOTE.—This scathing criticism of Baird Smith is one of the most surprising and interesting points brought to light by these letters. Wilson had been troubled in the past by the wild schemes constantly propounded by the hotheads among the Engineers. He had always been ready to condone an excess of zeal, and he was unruffled even by the ill-digested plans of the versatile Greathed, but inefficiency and lack of thoroughness he could not tolerate, and when carelessness or hasty work resulted in injury to his precious gunners' his indignation could not be contained. Lack of experience he could forgive, for he had suffered from it himself; but self-assertiveness on the part of those who were shown to be in error was to him insufferable.

Yet the Engineers, as soon as Nicholson was killed, assumed all the credit for the siege and capture of Delhi. All they had to do was to point out that in matters over which there had been disagreement, they were right and the worn-out Commanding Officer was wrong. They remained in

## ***The Mutiny day by day.***

India, Wilson had gone, and contradiction was no longer to be feared. That Baird Smith would have come to grief without his assistants, cannot be doubted. Lord Lawrence naturally gave the chief credit to Nicholson, his own nominee, but he stated that he regarded Alexander Taylor and Nicholson as "the real captors of Delhi". Smith was undoubtedly an able Engineer, but his recent experiences had been those of the theorist rather than of the man of action. General Sir Fredrick Maunsell says truly enough:—"We (the Engineers) doubtless thought ourselves fine fellows", and this impression they took care to make public; but he begs the question when he adds:—"Colonel Baird Smith, the Chief Engineer, filled his place alongside the General in command most suitably. He had a diplomatist's duty to perform, to the success of which his knowledge of India, and his exceptional powers of pen and speech contributed immensely". Even Taylor described him as "a master of organisation", but it is clear that Wilson, in whom previous events had proved the existence of a high degree of organising ability, was not prepared to endorse this judgment.

Much controversy ensued on the individual claims to merit after the event. After the long passage of time it is possible to regard the whole undertaking in its true perspective. The force before Delhi contained a number of distinguished men possessing marked individuality, and the results, though some degree of friction was inevitable, were of the happiest. Wilson himself was sick and kept going through sheer force of will. Baird Smith escaped complete collapse by an equal effort. Both were fortunately able to control the younger spirit with wise and prudent advice, and it is to the combination that success must be attributed.

During the 8th the work of completing No. 1 Battery was pushed on, and Campbell was able by the afternoon to begin to deal with the Cashmere Bastion. In the evening No. 2 Battery, in front of Ludlow Castle was traced out, its object being to destroy the Cashmere Bastion and the parapet on either side. This also had two sections, the right under Captain Johnson carrying two 18-pounders and seven 8-inch howitzers; while Captain Gray commanded the left section with its nine 24-prs. The two sections were some 200 yards apart. Their construction proved more difficult than had been anticipated, the walls being constructed entirely of fascines and their thickness being increased to no less than 30 feet.

On the 9th the mortar battery, known as No. 4 and commanded by Major Tombs, was traced. This was situated to the left and slightly to the rear of the left section of No. 2 Battery, and was eventually armed with four 10-inch and six 8-inch mortars. The work was done under cover, the battery being inside the Qudsia Bagh, and its objective was the Cashmere Bastion and Gate, the Church, Skinner's House and the Water Gate Bastion, which were to be kept under control by high-angle fire from heavy shells.

The remaining battery, No. 3, was traced on the evening of the 9th. This was an astonishingly bold piece of work entrusted to Captain Medley. His

instructions were to site a battery which would breach the curtain adjoining the Water Gate Bastion and destroy the defences in that area. Medley pushed further and further forward, till beyond the Custom House, which lay between the walls of the city and the Qudsia Bagh, he discovered a small ruined building unoccupied by the enemy, though no more than 180 yards from their defences. Taking possession of the Custom House, he laid out his trace under cover of the outer wall of this building, and this battery was completed and armed, under constant fire which caused much loss to the working-party, by the night of the 11th. Altogether 39 men were killed and wounded in this enterprise, but the cost was more than justified by the decisive result obtained.

CXIX.

*Camp before Delhi,*

*10th. Sept. 57. 2 p. m.*

I am glad you have got possession of my photographic books. Very little was done by the Engineers last night. A Battery for 18 Guns and another for 10 heavy mortars were armed, but not allowed to open, contrary to my advice and earnest request; the Pandies consequently and as was to be expected, made sorties upon both our left and right Batteries. They have been driven off with loss, but occasionally repeat them. Pandies are evidently getting desperate at our close approach to them. They are certainly not an Enemy to be despised, but fight well under cover of their big Guns on the City walls. It remains to be seen how they will behave when the British Bayonet gets among them. One of our Batteries is just reported as being on fire, and cannot be put out. It must have been great carelessness on the part of the Officer arming it.

NOTE--These remarks of the General throw an interesting light on the staff arrangements followed at that period. The operations were in the nature of a siege, and therefore the whole direction was in the hands of the Engineers. They were not employed merely as technical advisers, but actually assumed charge, for the time being performing the role of a general staff. It seems incredible that the officer in supreme command should be compelled to resort to advice and requests in a matter affecting the general conduct of operations; but the custom of the service then ruled that no interference with the Engineers when engaged in their special work could be permitted.

*The Morning by Day.*

At the same time Wilson appears to have become impatient. He was very anxious to reduce the period of preparation, because of the strain that was being imposed by the heavy work and the fearful weather on a force which he considered, with much reason, inadequate for the task before it. The heat was terrible, and dust-storms in September mean a temperature which only those who have been out in camp at that season can realise. The Engineers took their time on this occasion deliberately, being warned by the results of their undue optimism in the case of Brind's Battery. No 3 battery was intentionally kept ~~backed~~ ~~with~~ Nos. 2 and 4 were ready, in order to prevent the enemy from making a concentrated attack on the position. As it was, the covering and working parties were under continual fire, the rebels taking counter-measures which were only unsuccessful because they were attempted too late. They set to work to mount heavy guns along the curtain, and placed field guns in position wherever possible. They dug an advanced trench in front of the walls, which was lined with infantry along the whole length of the attack.

The fire to which Wilson alludes broke out in the left section of No. 1 Battery, about noon on the 10th. This work was constructed of sandbags and fascines, which became ignited by the constant blast of the guns. As Wilson remarks, this was evidence of hasty and unfinished work, and the battery was soon in a blaze which threatened not only the right section but the magazine. The situation was saved by Lieutenant D.B. Lockhart, attached to the Gurkhas, who with the consent of Major Kaye, took half a dozen Gurkhas and mounted the blazing parapet, extinguishing the flames by carrying up sandbags and cutting them open. Two Gurkhas were killed and Lockhart himself was shot through the jaw, but by persevering he managed to extinguish the flames and save the Battery. This gallant action induced Reid to recommend his subaltern for the Victoria Cross; but Wilson refused to take into official consideration any pencil notes received during operations, and the unfortunate result was that not only Lockhart, but some others serving under Reid, obtained no formal recognition of their distinguished services. The underlying reason is not evident, and it is much to be regretted that when a supplementary despatch was sent in by Reid to Norman, who was Adjutant-General in February 1859, the Commander-in-Chief declined to take any further action on the ground that the time for such recommendations had long passed. The incident is curious, for Wilson had the highest regard for Reid and valued his opinion highly: it is odd, too, that this gallant exploit was unnoticed by Brind in his original and supplementary reports.

## CXX.

*Camp before Delhi,*

*12th Sept. 57. 3 p. m.*

I am glad to hear of the English news and of Harriet's Boy, and of Lord Berners' approaching marriage. I can easily fancy Philip's anxiety and eagerness for news.

We are getting on very slowly. The Battery which was to have been opened this morning is only just ready. Everything however is arranged for the assault as soon as our Guns have made sufficient destruction of the walls, to give us a way in.

**NOTE.**—The delay occurred at No. 3 Battery, the completion of which, owing to its position, was especially difficult. A long approach had to be made from the rear, and the working parties could do little by day. Colonel Keith Young wrote on the 10th:—"Everyone is abusing the Engineers for having promised so much more than they have been able to perform. They talked of having all the batteries ready in one night, but nobody thought it was possible; and the result has proved this, for this will be the fourth night, and it is considered by those who are judges in such matters that as much as was possible has been done with their available means".

This was undoubtedly true, but Keith Young was in error in stating that Wilson would not allow the Ludlow Castle battery to be opened till No 3 was ready. Many went to the Flagstaff Tower on the morning of the 11th to see the new batteries open, but were disappointed. Later in the day, however, No. 2 commenced operations and in a short time silenced the Cashmere Bastion. The fact was that the whole camp was now in a state of nervous excitement, and in their eagerness to get on with the task they began to blame the Engineers unduly.

While the weather had improved, thanks to a shower and heavy clouds, the work in the front line was becoming more strenuous. The enemy by this time had organised an enfilading bombardment of our works, and it became a question whether operations would not have to be extended on the right. At one time it was arranged to encounter this serious threat by means of a night attack under Reid, with four companies of Guides and Gurkhas; but the prospects of success were uncertain and the scheme was countermanded by Wilson at the last moment.

The enemy were not content to use merely guns and rockets. On the afternoon of the 11th a party of some 200 cavalry attempted to raid the camp, and crossed the canal. When confronted by a detachment of cavalry they retired, but a squadron of the Guides under Sanford caught them in flank and killed 27 of them.

In the evening Major J.H. Campbell of the Artillery was severely wounded, and this necessitated a fresh distribution of officers. Major Brind continued to command No. 1 but took direct charge of the right section, Major Turner having the left. Major Kaye commanded No. 2, taking the right section himself and Captain Johnson the left.

The flank battery, No. 3, was at last completed by the morning of the 12th. Greathed, who was in charge of its construction found, that all his embrasures were masked by the old wall in front, and extensive alterations had to be made. When finished, the right section was armed with six 18-pounders under Major Scott, and the left with twelve 5½-inch mortars, in charge of Captain Blunt.

## ***The Mutiny day by day.***

This battery opened at noon on the 12th, and the bombardment was maintained steadily from 55 heavy guns and mortars. The effect was immediate; but though the bastions were knocked to pieces and two large breaches were made, the rebels stuck gamely to their defences and continued to respond with field-guns, rockets and musketry.

### CXXI.

*Camp before Delhi*

*13th Sept. 57. 2 p m.*

I have very sad news to send you to-day. Poor Fagan was killed yesterday afternoon in the Batteries and I have lost one of the best Officers in the Regiment; a finer fellow or more gallant Officer never lived. With the whole Force, Officers and men he was a universal favourite and lamented by all. What a blow to his poor wife and family!

All our batteries are now in full play and things are looking better. The crisis will soon come now one way or another. I am kept very busy and can only send short notes.

\* \* \* \* \*

Remember, should anything happen to me that my will is in the Iron Box which is in the Meerut Dum Dummah and of which Mrs. Hogge has the key.

NOTE.—Captain R. C. H. B. Fagan of the Artillery was killed in No. 3 Battery by a bullet through the head, just as he was being warned by Major Scott for his imprudence in exposing himself unnecessarily.

The bombardment continued all day and in the evening the Engineers stole down to examine the breaches, Lieutenants Medley and Lang reconnoitring the Cashmere Bastion and Lieuts. Greathed and Howe the larger breach near the Water Gate Bastion. Their reports satisfied Baird Smith and the General, who at once issued orders for the assault to take place on the following morning.

The orders were briefly as follows:—

*1st Column, Brigadier General Nicholson.*

H. M. 75th Regiment, 300 men, Lt. Col. C. Herbert.

1st Bengal Fusiliers, 250 men, Major G. O. Jacob.

2nd Punjab Infantry, 450 men, Captain G. Green.

*2nd Column, Brigadier W. Jones, C. B.*

H. M. The King's, 250 men, Lt. Col. R. Greathed.

2nd Fusiliers, 250 men, Captain Boyd.

4th Sikh Infantry, 350 men, Captain Rothney.

### ***3rd Column, Colonel G. Campbell.***

H. M. 52nd Regiment, 200 men, Major Vigors.  
1st Punjab Infantry, 500 men, Lieut. C. J. Nicholson.  
Kumaon Battalion, 250 men, Captain Ramsay.

### ***4th Column, Major C. Reid.***

Detachments of H. M. 60th Rifles and other Regiments.  
Sirmoor Battalion.  
Guides Infantry.  
Cashmere Contingent.

### ***5th (Reserve) Column; Brigadier J. Longfield.***

H. M. 60th Rifles, 200 men, Lt. Col. J. Jones.  
H. M. 61st Regiment, 250 men, Lt. Col. Deacon.  
4th Punjab Infantry, 450 men, Captain A. Wilde.  
Beluch Battalion, 300 men, Lt. Col. Farquhar. ✕  
Jhind Auxiliaries, 300 men, Lt. Col. Dunsford.

The first column was to storm the breach near the Cashmere Bastion and to escalate the bastion itself. The second was to storm the breach in the Water Gate Bastion. The third was to blow in and storm the Cashmere Gate. The fourth was to advance through Kishanganj and enter the city by the Lahore Gate; while the Reserve Column was to follow in wake of the first three and to throw in supports where necessary.

In addition a Cavalry Brigade under Hope Grant was organised and detailed to proceed to the right of No. 1 Battery, in order to prevent any flank attack on the storming columns and to guard the camp from surprise. The camp itself was left to convalescents and a small force of cavalry and artillery. This involved a great risk, but risk was inevitable. The total effective strength on the 11th September was 9866, and this had been reduced by 327 during the bombardment. The British units were mere skeletons, the average of the seven battalions being but 382, while the Gurmukhs had shrunk to 212 all ranks.

Reid at once protested against the orders he received and informed the General that if he carried them out, his column must be destroyed, as he would have to face two untouched bastions. He proposed therefore to carry Kishanganj and the suburbs, to hold the fortified *sarai*, and then to follow the dry canal to the Cabul Gate, which should be opened from the inside by Nicholson's column. Reid was undoubtedly right, and it is hardly possible to avoid the conclusion that the Cabul Gate, and not the Lahore Gate, was intended to be the objective. The latter no doubt offered direct access to the Chandel Chawk and the centre of the city, but this portion of the defences had been untouched and was strongly held; whereas the capture of the Cabul Gate was the natural complement to the destruction of the Mori Bastion.

Apparently Wilson did not write on the 14th. The only reason for uncertainty on this point is that the mail-bags were robbed.

*Delhi,**15th. Sept. 1857.*

I sent you a 'Tel: Message to Umballa yesterday, from thence by Express through Spankie to say we had entered the City. I can say little more to-day. Our attack which commenced so favourably, did not end so well. In the first place Reid's Column upon which I so much depended failed in taking the Pahareepore Suburb, all owing to the cowardice of the Jummao contingent, who ran away leaving their Guns to the enemy. Reid was wounded (not dangerously) and his Column had to retire to their former position. The 1st Column after having cleared the walls as far as the Cabul Gate, met with serious opposition between that and the Lahore Gate, Nicholson was dangerously wounded, and his Column with the 2nd. retired to the Cabul Gate. The 3rd. Column again after having penetrated nearly as far as the Jumma Masjid, had also to retire, first into the Begum's Garden, and finally on the Reserve. We are now holding what we have taken, but nothing more. Our position is from the Cabul Gate to the College, and I cannot say we have complete possession of that. I am in Skinner's house. Brig: Jones has the Cabul Gate. The Europeans with the Column with me got hold of lots of beer in the Shops, and made themselves helpless. I have not a Queen's Officer with me worth a pin, or who can preserve any sort of discipline except Jones of the 60th Rifles, in fact the men are so badly officered that they will and can do nothing. Tomorrow I hope to be able to advance my position a little. All we can expect to do, is to get on gradually, but this street fighting is frightful work. Pandy is as good a soldier at that as our men. We have lost heavily, both in officers and men. I am knocked up and unequal to any exertions. The Sun knocks me down at once. Altogether our prospects are not good. I cannot write more. John is well and working hard.

NOTE—The telegraphic message is still in existence and runs as follows:—



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From Delhi City 10 a. m. To Umballa Brigadier.

From Major General Wilson. To Brigadier Haitley.

Number of words 30.

S. R. Prepaid.

Delhi has been assaulted this morning but hard (?) fighting going on. Our Column making slow progress. Send Express to Mr. Spankie to be forwarded by him to Mrs. Wilson Mussourie.

Electric Telegraph Office }

Sup: Radford.

14th September 1857. }

Head Assistant in charge.

Wilson afterwards modified his opinion as to his officers, as will be seen: but the disappointment which followed on the expectations born of the initial success was great, and he was deeply distressed by the thought that discipline would have carried him through to complete and immediate victory.

On the 14th Wilson made Ludlow Castle his headquarters during the assault. He was in good spirits and as imperturbable as ever under fire in spite of some narrow escapes. Later in the day he appears to have been overcome by the sun, and this affected his health greatly. Added to his indisposition, he had grave anxieties. Others considered the situation even more desperate than he himself, and in spite of allegations that Wilson wished to retire from the city and was only dissuaded from so doing by Taylor and others, these letters, in which he gave full play to his physical and mental depression, do not give the least support to a calumny which gained too ready credence.

In this letter Wilson summarised the story of the assault briefly but clearly. It is unnecessary to do more than recapitulate here the well-known story of the action. Nicholson, as soon as the artillery barrage lifted, sent forward the 75th, who after a short but severe struggle stormed the breach by the Cashmere Bastion, the passage of the ditch entailing heavy loss. The second column, led by the King's, had a very similar experience; 50 out of the 75 who formed the storming party at the Water Gate Bastion being shot down.

Meanwhile the Sappers with the 3rd column, thanks to the gallantry of Lieutenants Home and Salkeld and Sergeant Smith, all of whom were awarded the Victoria Cross by the General, rushed through the Cashmere Gate immediately on the explosion, encountering a terrible fire from the ramparts on their right.

The whole area in the angle from the Cashmere Gate to the Church and the river was quickly cleared, those of the enemy who escaped retreating rapidly into the city.

The first and second columns were then combined and led by Nicholson along the walls towards the Mori Gate and Bastion. These were secured

***The Mutiny day by day.***

without great difficulty, and Nicholson pushed on, clearing the walls and barriers, as far as the Cabul Gate. Each position was contested, and as soon as it was won, the guns were turned against the enemy. The resistance, however, increased steadily and the casualties grew apace. In attempting to press forward towards the Lahore Gate and the Burn Bastion, before the ground won had been consolidated, Nicholson was mortally wounded and the advance in this direction was definitely checked.

During this struggle, which continued all day, Campbell with his column cleared the angle near the Water Gate and, guided by Sir T. Metcalfe, made straight for the heart of the city. This was a desperate venture and should not have been attempted. The column gained possession of the Kotwali in the Chandni Chauk, after great loss, and could not proceed further. Campbell had to retire, first on the garden now known as Queen's Gardens, and then on the Church, his retreat being pushed severely by the rebels. This adventure into the city was most disturbing to Wilson. It had resulted in nothing but heavy loss, and had necessitated the employment of the reserve, which had followed through the Cashmere Gate, in a direction which had not been anticipated.

The attack had been successful up to a point, and beyond that was almost disastrous. Nicholson had been stopped chiefly because of the lack of exterior support on his right. The fourth column under Reid had suffered from ill-luck from the outset. The Horse Artillery battery detailed to his column was late, and he was unable to move till half an hour after the breaches had been stormed. Meanwhile the Cashmere troops had advanced without orders, had come into contact with the enemy and, following the example of their commander, had fled, abandoning their four guns.

As a matter of fact, the position which Reid was expected to take without any artillery preparation, was one of great strength and had been fortified in a manner wholly unforeseen. The column was committed from the start to heavy fighting in the streets and the vigorous attack on the Cashmere troops operating to the right drove back that contingent in panic through the main column, causing much confusion. Reid was severely wounded, and his successor was compelled to retire to his original position, under cover of the light guns from the Sammy House battery.

The news caused Wilson grave concern for his base camp, and he had to dispatch reinforcements, which could ill be spared, to this quarter. A wing of the British Battalion soon arrived, by means of which it was possible to frustrate any attempt on the Ridge. Heavy work, however, fell on the Cavalry Brigade, which had been detailed to guard the flank of the assaulting columns. The rebels, following up the flying Cashmere Contingent, emerged from Kishanganj and opened a heavy fire on the cavalry, who had moved forward and halted some 400 yards from the Cabul Gate. Hope Grant ordered up his artillery, of which Tombs had resumed command, and the enemy were driven back, leaving two guns which were spiked. For two hours the brigade held its ground, under

continuous fire from the City and the gardens. The danger was still great and Wilson sent Bouchier with his battery to their aid ; but the casualties continued to increase, and then the General utilised the remainder of his reserve by pushing forward the Biluch Battalion as well as two companies of the Guides and Gurkhas. This gave relief, and Grant then withdrew the remnants of his gallant force to Ludlow Castle.

The position at this late hour of the day was unsatisfactory. The troops had been under arms from 3 a.m., the assault having taken place shortly after daybreak, within the city there was no defined front, discipline had to a large extent broken down among the exhausted infantry, opposition was persistent and severe, only seven out of seventeen Engineer officers were available for duty, and the exhausted troops were unable to do much in the way of improvising defences. The losses moreover had been very heavy, amounting on this day alone to 282 killed, 877 wounded and 10 missing. There were no reserves, and the question of the next move was insistent. In these circumstances Wilson naturally consulted his staff. That he put before them the question of retiring is certain, but that he was inclined to this step is a baseless assumption. He received the reply, delivered by all with one voice and with the greatest determination, and this reply satisfied him at once. He was ill, and he needed support, but having obtained it, he was well content to struggle on. The number of those who claimed, or on whose behalf claims were made, to have swayed the decision of their vacillating General, is amazing: yet all admitted that the position was little short of desperate, and Wilson had every cause to put forward a plain appreciation of the case in order to ascertain definitely the temper of his staff.

Such was the famous controversy. It was exploited to the utmost by those who hoped to gain at the expense of their General, and in fact the discussion only arose some time after the event. Neither Keith Young nor Greathed suggested anything of the kind. The latter wrote on the next day. "The General, I am thankful to say, is unharmed; and may he be so preserved, for there is no second-in-command to look to now." Such an expression would not have come from one who regarded the commander as a menace to his force and its success. Turnbull, who was on the personal staff, assured Colonel Muleson, who as usual had no thought but for the sensational, that the story of a projected retreat was incorrect. He wrote: "Even if the General had some idea of the kind, he had every excuse. The 'very plan which had been urgently 'pressed on him had failed; the columns had been stopped and driven back; and, instead of taking the whole city, we merely held a line of rampart in a 'city some seven miles round."

The fact was that Baird Smith had overestimated reasonable probabilities, and now the mistake had to be rectified by those of his assistants who had escaped with their lives. The loss of senior officers was serious. In addition to Nicholson, who died nine days later, that fine soldier Major G.O. Jacob had been killed and with him two other officers attached to his regiment, Captain G. G. McBarnett and Lieut. R. Speke. Others killed or died of wounds were the gallant Salkeld of the Engineers, Lieut. F. S. Tandy of the same corps,

### ***The Mutiny day by day.***

Lieut. C. P. Rosser of the Carabineers, Lieut. W. W. Pogson and W.R. Webb of the King's, Lieut. J. H. Bradshaw of the 52nd Foot, Lieut. J.R.S. Fitzgerald of the 75th, Lieut. R. P. Homfray of the 4th Punjab Infantry, Ensign J. S. Davidson of the 2nd Punjab Infantry, and Lieut. A.W. Murray of the Guides, More than 50 officers were wounded, including eight Engineers.

Wilson fixed his headquarters for the night at the Skinners, House and did all he could to restore order and to effect some semblance of a defensive line from the Cabul Gate to the college. He took steps to destroy all the liquor that could be found, in order to remove temptation, and also started to organise batteries to assist in further progress and in keeping down the incessant fire directed by the enemy on the occupied angle. Few obtained sleep that night, but on the following day there was a comparative lull, as the enemy made no attack and preparations were pushed on with more vigour and method.

### CXXIII.

*Delhi.*

*16th Sept. 1857 2 p.m.*

We took possession of the Magazine this morning, with the loss of only three men wounded. This advances us a little, but it is dreadful slow work. Our force is too weak for this street fighting, where we have to gain our way inch by inch, and of the Force we have unfortunately there is a large portion besides the Jummao Troops upon whom I can place no confidence. One Regiment of H. M. Service, I regret to say, is in this predicament. What gives me however most trouble, even more than the Enemy, is the immense quantity of wines, spirits and beer which is discovered, and which our fellows European & Native get hold of, and make beasts of themselves and incapable of doing their duty. I find myself getting weaker and weaker every day, mind and body quite worn out. I walk with difficulty, and fully expect in a day or two to be laid altogether on my bed. This is very sad and frets and worries me. I do not suppose any Commanding Officer had such wretched tools to work with, as I have. The only good Officers I had wounded, and such a set left, no head, no control over their men. Old Jones of the 60th is the only one with me I can depend upon. The other Column has two or three good officers in it, in Burn, Great-hed, The Rebels who so long attacked Reid's column from

Pahareepore evacuated the place last night leaving their heavy guns behind. How I wish Reid could have driven them out on the 14th, and joined in the attack of the city.

I received yours of the 12th to-day, Dearest. you say nothing of yourself I hope you are all well again.

We have a long and hard struggle still before us. I hope I may be able to see it out. I fear, dear, you must be sadly disappointed with my letters, but I have so little time, and really have not strength to write much to you even.

God bless and protect you, Darling. What a blessing it would be to have a little quiet with you only with me.

NOTE. Wilson was now, owing to bodily and mental fatigue, at the lowest pitch of depression, but things were going better already. The enemy had estimated his success higher than he had been able to do, for the reason that their loss in moral was greater even than that in men. His principal object was first to restore discipline, which in the wild excitement of the assault had failed to a disconcerting extent, secondly to consolidate the ground won and lastly to push on the attack from his new position. This last was unusual to a degree. The captured fortifications had to be used not only for attacking the remaining strong points held by the rebels, but also to support the infantry in house-to-house fighting of a peculiarly trying nature. The struggle was persistent and the area to be cleared was large and congested. The problem demanded a high standard of initiative resource and restraint on the part of subordinate commanders. Inter-communication and coordination of action were difficult, and economy in the use of the troops was of paramount importance.

Accounts given of the operations within the city are based on the narratives of individual observers, few of whom were in a position to estimate the progress of the attack as an organised whole. The impression imparted by these accounts is that confused fighting went on for some time haphazard, without any particular plan or direction. This impression was wrong, for Wilson succeeded by reason of a clearly defined system. His chief anxiety was for his flanks, as he saw that unless he could effect at least a threat of outflanking the enemy, matters were likely to reach a deadlock. Hence arose his concern for the Magazine on his left, and on his right for the inhabited area lying beyond the city walls. The failure to eject the enemy from the latter during the assault had been a great disappointment to him, and he steadily maintained the pressure, with inadequate means it is true, until his object was achieved. This success was strategic rather than tactical. It was effected without loss, and the extensive system of intrenchments constructed by the enemy in Teliwara were captured en bloc, with five heavy guns which the rebels in their haste had left behind. This

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evacuation was of great value to the British force, as the sole remaining threat on this flank was the Burn Bastion, commanding the Lahore Gate, and the occupation of the suburbs made resistance in this direction passive rather than active.

On the left flank the Magazine was stormed early on the morning of the 16th. The mortar battery in the College grounds had breached the walls effectively and the storming column, comprising H. M. 61st Foot, the 4th Punjab Infantry and a wing of the Biluch Battalion under Colonel Deacon, easily effected an entry and with less than a dozen casualties disposed of all the rebels who had failed to escape from the enclosure. The capture included no fewer than 232 guns and enormous quantities of shot and shell. The position was rapidly consolidated and preparations were made to commence closer operations against Salimgarh and the Fort. In the afternoon the enemy organised a heavy counter-attack on the Magazine, attempting to scale the walls with ladders and to set fire to the roofs. They actually carried the workshops, but were eventually driven out, owing largely to the gallantry of two young officers. Lieutenant Renny of the Artillery and Lieutenant R. Thackeray of the Engineers mounted the roof of the Magazine under a heavy fire at close range, the latter extinguishing the flames by pouring water handed up in *mussuks* by a *bhisti*, while Renny kept off the attack by throwing down shells on the enemy which were passed to him with their fuses lit. Both escaped untouched and each most properly received the Victoria Cross.

In the centre the advance was slow and methodical. Each house occupied was fortified in turn by means of sandbags, and no extensive movement was attempted.

Wilson, under medical advice, had been compelled to spare himself in all matters of routine work, and by appointing Colonel Seaton his Chief of Staff, took a wise step which he might with advantage have taken earlier. The force was much concerned at the illness of the General, to whom all ranks were sincerely attached. Whatever criticisms were levelled at him, they were attributed in every case to his physical condition, the cause of which was thoroughly understood.

### CXXIV.

*Delhi,*

*17th Sept. 1857 2 p. m.*

We are establishing ourselves firmly in the position we have taken up. The Rebels appear to be very disheartened and are running away from the City in great numbers. In fact I should not be surprised to find the whole City with exception to the Palace

evacuated in two or three days. I hope in two or three days to have a battery erected against the Palace, and to breach it, which would settle the business at once. I received yours of the 13th. this morning. I am feeling a little better to day, but very weak still. I cannot get the necessary sleep to keep me up. John is quite well. Reid is doing well and will be at his duty again in a few days. The ball has not touched the bone, only a long scalp wound. The good Doctor came from camp to-day to see me, he is looking quite well.

NOTE.—During the day the line was gradually straightened. From the magazine a connected chain of posts extending to the Cabul Gate was established, and to the rear of this line communication was kept up without danger of interruption. The Bank, Major Abbott's house, and the large dwelling of Khan Muhammad constituted strong points which commanded all the City up to the Chandni Chauk and the line of the canal. The battery established in the Magazine dominated the Fort, and while active opposition was encountered on the right, the relaxation elsewhere was manifest. The rebels were retreating in large numbers by the Delhi Gate along the Agra road, the bridge of boats being now denied to them as it was commanded by the batteries on our left.

CXXV.

*Delhi,*

*18th Sept. 1857.*

We are still in the same position in which we were yesterday. An attempt was made this morning to take the Lahore Gate, but failed, from the refusal of the European Soldiers to follow their Officers. One rush and it would have been done easily, but they would not make it. The fact is our men have a great dislike of street fighting. They do not see their enemy, and find their comrades falling from shots of the enemy, who are on the top of houses, and under cover, and get panic, and will not advance. This is very sad, and to me disheartening. We can I think hold our present position, but I cannot see my way on at all. I have now only 3100 men, (Infantry) in the city, with no chance or possibility of any reinforcement, which if I were to attempt to push on into the City, would be lost in such innumerable streets, and masses of houses, and would be annihilated or driven back. It is true that a great number of the Enemy

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have bolted, but they have still a large camp between the Delhi and Adjmere Gates, and those who have bolted away may possibly return, when they find we cannot make any progress. Again in our favour, we have possession of nearly all the their Guns, shot, and shell, except those they have in the Bastions still in their possession, and we are Bombarding, from an easy distance, Selimghur and the Palace. I have always been of opinion that to be successful perfectly, the Assault on Delhi should not take place until the Force from Cawnpore could come up to support us, but their inability to move forward, and the pressure from Govt. and Sir J. Lawrence forced me to make the attempt, and I trust in God it may yet prove successful, but we are and always have been, too weak for the work for the work to be performed. It has been a hard task imposed upon me, Dearest, harder than I can bear, both mind and body are giving way. Since the night of the 13th I have certainly not had five hours sound sleep and nature cannot stand it. I trust, however, and think I have hitherto done my duty. May Almighty God still support me in doing so.

I received your dear letter of the 14th, this morning. You were right in supposing this would be the day of our struggle. I only wish it had been more successful and that we could have finished the business on that day. This is a very doleful letter, Dearest, but the state of my mind and body makes me probably more desponding than I should be.

\* \* \* \* \*

Colonel Smith is equally if not more knocked up than I am, and has been forced to go back to Camp.

NOTE.—Wilson, who had been reported as much better, was greatly depressed by the failure of an attempt to dispose of the opposition still persisting on the right. He had decided that, before any further advance could be made on the Fort, he could not afford to move forward his left flank while the right, on which his communications depended, remained pinned to the ground. The position there was that the enemy held a fort in the shape of the Burn Bastion, with another large work behind it, and the main rebel camp to the rear. Accordingly a column under Colonel Greathed was organised from detachments of the King's, the 75th, the 1st Fusiliers and some Sikh Infantry. The attack failed. The



column attempted to advance on the bastion by a narrow lane, and the opposition offered by a single heavy gun which barred the passage stopped further progress. The force retreated hurriedly under musketry fire from the houses, which only served to increase the dislike of the men to street-fighting. The 75th were the chief sufferers, one officer, Lieutenant R. V. Briscoe, and five men being killed, and ten wounded.

In other directions the position was improving. The force practically commanded the Chaudni Chauk, and protection was developed all along the line. There was still much opposition, but Wilson perceived that this would disappear if he could but secure the key to Delhi, and this key was the Lahore Gate and not the Palace of the Mughals.

## CXXVI.

*Camp before Delhi,**19th Sept. 1857.*

I came out to Camp last night in hopes of getting a good night's sleep. I was not however very successful, brain, nerves and body have been too much strained to quiet down so quickly. I am going back to the City immediately, but shall try to get back here to-night, to sleep.

I received your dear letter of the 15th, this morning. I can easily imagine the state of anxiety you must have been in, for a long time, and I fear you will have much more to undergo for a long time. We are however progressing favourably through bombarding the City and gradually seizing strong posts, in advance of our position. The King evacuated the Palace yesterday afternoon with most of his followers, finding it too hot to hold him. Report says very few are left in it. He is gone to a place near the *Poorani Kella* (Old Fort) outside the City. We have met with a very heavy loss in taking what we have done. I have not yet seen the returns, but hear the total loss in killed and wounded is full 1150 men, including 46 Officers. The killed is only about 250.

Brigadier General Nicholson is a very great loss to me. I have no one who can supply his place. I am very much afraid we shall lose him. He was not going on at all favourably yesterday.

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I send you, Dearest, a bill on the Deyrah Treasury for Rs. 1500, which will keep your pot boiling for some months. With it I send the letter of advice, which you must send with the Bill when you get it cashed. I hope by nursing myself for a day or two to get all right and strong again, I cannot say I have gained much to-day.

**NOTE.**—This day saw the beginning of the end. The moral of the rebels had been undermined, and it gave way under the continued pressure. The Fort had become untenable owing to the incessant bombardment from the now numerous batteries which were playing incessantly on the buildings within the high walls. Fortunately for the archaeologist, no suitable position had yet been secured from which to breach the walls, and this became unnecessary as soon as Bahadur Shah made up his mind to decamp. He fled by the Delhi Gate and took refuge at the shrine of Nizam-ud-Din Aulia, near the tomb of Humayun. On Saturday morning, the 19th, the impression gained ground that the Fort and Ballugarh had been abandoned, and a reconnaissance drew no opposition. A cavalry screen thrown forward on the extreme right revealed the fact that the Bareilly mutineers had evacuated their camp near the Turcoman Gate and had retired towards Muttra, while all day small parties of rebels ran the gauntlet of the bridge-of-boats, and escaped into the Doab. The rebels still were in force towards the Jami Masjid and Daryaganj, but this was little more than a rearguard position.

Of more importance was the action in progress on the right, and for this the credit lay unquestionably with Alexander Taylor. This young officer acted on his own initiative, without consulting Baird Smith, who was now *hors de combat*, but he explained his plan to the General, who accorded his concurrence and full support. His method was that of advancing on the Burn Bastion by sapping through the houses in succession and avoiding the streets and lanes altogether. Progress was necessarily slow, but the work begun on the 18th was pushed on without rest, and each house entered was fortified till the advance took the form of a chain of strong posts, along which communication was effectively secured. Towards midnight on the 19th, the sapping party reached a house which dominated the stubborn bastion, and from this they opened a sudden fire with such effect that the enemy, imagining themselves cut off, evacuated their stronghold in haste. A column, comprising some 500 men of the King's, the 75th and a Sikh regiment, followed the Engineers and were ordered to take possession of the bastion; but Brigadier Jones experienced the same trouble as before, the advance through a portion of the city hitherto untouched revealing more stores of liquor, to which the troops fell ready victims. The column was halted for the night, in order to prevent further straggling, and Wilson sent some officers of his staff to spend the night in the bastion and take measures against a possible counter-attack. The precaution proved unnecessary, but the General saw clearly the importance of this position, the

capture of which revived his spirits greatly, as at last he showed his way clearly to complete success.

Wilson appreciated to the full the services rendered by Taylor in this operation, and thereafter showed much more confidence in the judgment of this officer, who remained his chief technical adviser till he left Delhi. For his part in this exploit Taylor received his full share of credit, and the subsequent erection of a statue in his honour outside the Mori Gate has contributed perhaps to assign him in public opinion a larger share in the capture of the city than he, a zealous assistant of his chief and of the General in command, would have been disposed to claim for himself at the time.

As a set-off to this success, Wilson learned that evening of the death of his friend, Hervey Greathed, the Commissioner of Meerut, who was seized with cholera in the morning and died after a short illness.

## LECTURE NOTES.

ON

### ***The Principles of the Field Service Regulations.\****

*By Bt. Lt.-Col. L. V. Bond, R. E. General Staff.*

1. We are constantly told, we constantly tell others, to base instruction on *principles*, to enforce the *principles*, to practice the *principles* of Field Service Regulations.

2. "The fundamental principles of War", say the F. S. R. "are neither numerous nor in themselves very abstruse". Yet we know that the maxims, the rules, call them what you will, laid down in the F. S. R. *are* very numerous, that they are difficult to understand, to learn and to remember. How then can we reconcile the apparent contradiction? What are these few and simple principles of war?

3. Let us begin at the beginning. What is our object in war? To beat the enemy. When is the enemy beaten? Is it only when he is physically or financially incapable of continuing to fight? No. When then is an Army beaten? Prince Kraft has given us the answer in a phrase which Marshal Foch has so convincingly illustrated. "These troops only are beaten who believe themselves beaten." "A battle lost is a battle one thinks one has lost."

Our whole aim in war is, then, to create on our own side a feeling of confidence, of certainty in success; to create on the side of the enemy, in the heart either of the Commander, of the soldier, of the nation, in any one or in all of these, despair, hopelessness.

*"The secret of victory lies in the hearts of men".*

4. This is the one, the only, elemental principle of war. All our teaching, all our system, all our regulations are built up on the foundation of this one principle, the one, the only great principle of war, to which all others are secondary, from which all others are derived.

*\*These notes refer to F. S. R. 1909 (1914 reprint).*

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5. At the bottom of all the theory and practice of war is man, the heart of man. On the one side its enthusiasms, its determination, its ideals, its hopes ; on the other its weakness, its instincts of self preservation, its fears, its terrors ; above all anxiety, fear, terror in all its manifestations, at its worst panic that wild unreasoning terror which grips the multitude and sweeps it headlong away.

6. This then is the instrument with which, on which, against which, we have to work. All that we do in peace, our every action in war, must be directed towards one object, and one object only ; to create on our own side a confidence of winning : to create in the enemy a hopelessness, a despair of winning.

7. We must create on our own side :—

(a) in all ranks,

(i) Confidence in themselves ; due to physical fitness, freshness, the result of youth, physique, physical training ; the result in war of good food, good clothing and equipment, good arrangements for billeting, camping, marching, for the advance to the battle ; the result of protecting our men from discomfort, and danger.

(ii) Confidence in themselves ; due to a consciousness of superiority over the enemy in armament, in training, in skill in the use of weapons, in education, in cunning.

(iii) Confidence in their leaders ; due to admiration of their courage, their coolness, their knowledge, the excellence of their arrangements, their care and sympathy.

(iv) Confidence in themselves, their leaders, their comrades, in the army as a whole, due to success in resisting the enemy's attack, but above all to success in attacking the enemy.

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- (v) Courage ; due to all that produces confidence, to national characteristics, to high ideals, to tradition, honour, self respect.
- (vi) Determination to win, determination not to be beaten ; due to all that produces courage, to a good cause, esprit-de-corps, patriotism, to the team spirit; when all else fails, to that part of discipline which consists of a habit of obedience.

We must create,

(b) in our subordinate leaders and staffs,

- (i) All those qualities enumerated above, and in addition ;
- (ii) Confidence in those under their command; due to knowledge of their high military qualities, knowledge based on peace training and administration, and on a study of the astonishing tenacity and high spirit of our soldiers as recorded in the history of past wars.
- (iii) Confidence in themselves; due to knowledge, above all, of the human heart, of how it reacts to all the influences of war, knowledge based on personal experience of war, on observation of men in peace, on the experience of others in war, that is to say on a study of the behaviour of troops and of their leaders as recorded in military history, in the records of eye-witnesses of past wars.
- (iv) Confidence in themselves ; due to a knowledge of their profession, to experience in the handling of troops; to the knowledge that their own dispositions are such that they themselves have nothing to fear from the enemy, that they cannot be surprised, that they will not " let down " others.

Finally we must create,

- (c) in the supreme command in addition to *all* the above:—

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- (i) Confidence; due to complete knowledge of the enemy, due to the excellence of our intelligence service.
- (ii) Confidence in the army due to a knowledge, that it possesses those qualities which we have already enumerated, that it will carry out his wishes exactly owing to its intelligent discipline, to its excellent organization, to a common system of acting, to a common system of thinking, the result of a common doctrine ingrained in all ranks by a uniform system of training.

Finally:—

- (iii) Confidence in the Government and in the nation, that they will not fail in good or evil fortune.

8. We must create on the enemy's side,

- (i) Among all ranks,
  - (a) Physical fear ; by killing him, wounding him, destroying him by the use of arms more numerous, more destructive, more skilfully handled, more irresistible than his own.
  - (b) Mental fear; by continually threatening destruction, by attacking by means which he cannot parry, from directions from which he is unable or unprepared to resist us.

We must endeavour to create,

- (c) The fear of the unseen, the terror of the unknown by surprise, by acting secretly, swiftly, unexpectedly.
- (d) Misery, despondency ; due to hunger, thirst, fear, cold, fatigue, lack of sleep, by continually firing at him, threatening him, destroying his communications, his organization, his rearward services.
- (e) Hopelessness, distrust in his leaders, his comrades and himself as a result of continual reverses, defeats, miscarriages.

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We must destroy by propaganda,

- (f) his determination to win, to fight on, by destroying his belief in the justness of his cause, in the good faith of his leaders.

We must create,

- (ii) in the enemy commander,

- (a) Crushing anxiety, hopelessness, lack of confidence in himself and in his army, by keeping him in ignorance of our circumstances, of our intentions, by striking suddenly, unexpectedly, overwhelmingly at the point and in the direction which he least expects or wishes, by continual activity spoiling his plans, breaking up his preparations before they have time to mature.

- (b) a belief in the irresistible superiority of our arms, of our skill, our numbers, our efficiency.

We must create also,

- (iii) in the enemy nation by victories, by blockade, by propaganda, a feeling of hopelessness, of distrust, a desire to stop the war at all costs.

9. To strike at the *soul* of the enemy, to establish a *moral* superiority, this must be our one object in war. Our reason affirms it. All history proves it. The records of war teem with examples of armies defeated only by their own terrors, of victory turned to defeat because the heart of the Commander failed him. The history of the British army is full of instances of victory won against overwhelming superiority of men and material because the British soldier refused to believe himself beaten.

10. This then is the single foundation from which all other principles are derived,

"The secret of victory lies in the *hearts* of men".

"That army only is beaten which *thinks* itself beaten".

"In war *man* is everything, the rest nothing".



11. Next in importance yet secondary to this first principle since derived from it, equally universal in time and place since it is based solely on the unchanging nature of the human soul, secondary yet itself the basis of all others, comes this principle.

*"Decisive success in war can be gained only by a vigorous offensive".*

Why is this? Because by adopting a defensive attitude we can, at the best, do no more than convince our enemy that he cannot beat us. It is only by dealing him blows, violent, staggering, repeated blows, blows which he finds he cannot parry, that we can convince him that we are indeed the better men, that he cannot hope to win, that he himself must be beaten. This is true for the individual man, it is therefore true for armies which are but collections of individual men.

12. There is indeed another great principle, elementary in so far as it is derived directly from our first principle, but universal only if we conceive of war in its usual meaning, that is to say, as the struggle of two armed communities each determined to defend itself and, if possible, to defeat its enemy.

The principle is this *"that victory can only be gained by defeating in battle the armed forces of the enemy"*.

The truth of this is evident, since by hypothesis the loser nation starts with hope based on the success of its armed forces; until these are beaten in battle it can still hope for success, it is still unbeaten. But once its armed forces are beaten, unless it can create more or revive their belief in possible victory, it cannot hope to resist longer, it is in fact beaten.

This principle, however, is for the use of the supreme Command alone; it is a purely strategical principle.

13. The subordinate leader and the man in the ranks are concerned only with the application against the armed forces of the enemy of the principle of "the vigorous offensive", and from this principle we now find a group of principles derived.

14. First, it is evident that our "vigorous offensive" will have the greatest possible chance of success if we strike the enemy at the most favorable time and place and in the most

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favorable direction. Which will be the most favourable time, place, and direction? That at and in which a blow will be most irresistible, will most shake our enemy's confidence, disturb his plans, break up his organization.

To discover which is the most favorable spot, how best to strike, how best to exploit success, we must evidently ascertain as correctly as possible the enemy's strength, his dispositions, his armament, his morale, his organization, in fact all about him. We must also know all about the ground and about our own troops, how they are distributed, what is the state of their strength, their morale, their armament; we must also know what they are doing. That is the next principle; "*To inform oneself as fully as possible about the enemy, about the ground and about one's own side*". This involves "intelligence" in all its forms, secret service, maps, air reconnaissance, patrols, observers, raids, even preliminary attacks. As regards our own troops it involves liaison, intercommunication, report centres, contact aeroplanes, reports and returns. It calls for control, strict obedience to orders, movement by bounds and so on.

15. Having decided where to strike and how, we must now prepare the attack. This requires time, it requires space. While we are preparing the enemy may move, may take the initiative, may attack and upset all our preparations. We must prevent this. How? It may be done in various ways. We may prepare the attack out of striking distance and trust to the secrecy and intense speed of our approach to save us from interruption. This method is rarely possible by itself in land warfare. On land, where at present we are still comparatively slow moving, we must watch the enemy so as to divine his intentions, to have timely notice of his moves (protective reconnaissance). We must detail detachments, advance guards, flank guards, rearguards to stop him, to fix him. We may occupy with these detachments a defensive front; or we may gain time by manoeuvre; or we may make a holding or fixing attack. In any case we must invariably take measures to gain sufficient time, and to keep sufficient space for our attacks to develop under favorable conditions. We must take measures of *Security of Protection*.

And since in war, our information can never be perfect, we must always keep something in hand to counter unexpected action by the enemy, to reinforce a detachment, to re-establish a broken front, to furnish a fresh detachment. We must in fact *keep a reserve* (distinct from our striking force), we must *organize in depth*. All these measures are however only consequent on the principle itself, which is "*to secure for ourselves freedom of action*".

16. We have now in all probability used up a large portion of our force in these detachments, defensive fronts, local reserves. If we use too large a portion the decisive attack, up to which all our preparations are leading, will fail through being too weak. This gives us the principle of "*Economy of force*"; to use as few troops as possible in these subsidiary duties, and with this in view to increase the holding or fixing power of these detachments by making them strong in fire power in proportion to man-power, by manoeuvring as in fighting : rearguard action, by using obstacles, field fortifications. The same principle, Economy of Force, requires us finally so to arrange our detachments that, at the psychological moment, all can join, either directly or indirectly, in the decisive act.

17. Having secured time and space to prepare, to choose our time and method, nothing in the way of preparation must be left undone which time and circumstances will permit. That is the next principle, "*to prepare for the decisive action as completely as possible*", to foresee requirements and to provide for them.

18. We are now ready for the "denouement", the decisive blow, the supreme act of that "dreadful and impassioned drama", war. It must not be allowed to fail if it is humanly possible to prevent failure. It may still require for its preparation preliminary bombardments, preliminary attacks, subsidiary attacks. But in the end we must put into the decisive battle itself, every man, every gun, every round, every ounce of energy of which we are capable. We must deal a blow or series of blows of the most intense and appalling character possible, with all

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the resources of the army, of the nation. There must be no half-hearted measures; we must stake everything. This is the principle of unlimited war, "*to strike the decisive blow with all our forces*".

19. Such then are the basic principles of war, whether in large or small operations:—

1st. *To direct every action against the soul of the enemy, to make him think that he is going to be beaten, while refusing to believe that we are beaten ourselves.*

2nd. *With this object, sooner or later, at the most favourable opportunity, to attack, to strike a supreme, a decisive, blow.*

3rd. *In order that the attack may be put in at the right time and place, to find out all we can about the enemy, about the ground and about our own side.*

4th. *In order that we may prepare the blow; that we may strike how and when we like, "to secure for ourselves freedom of action", preventing interference by detachments, by defensive fronts, by secrecy, by speed, by watching the enemy, stopping him, fixing him, mystifying and misleading him.*

5th. *To ensure economy of force in subsidiary operations, by using as few troops as possible, and by so arranging our detachments, keeping touch with them, that at the decisive moment, all can act against the enemy in some way or another, that all can "pull their weight" at the supreme instant.*

6th. *To prepare the blow as completely as possible by a complete organization, by foresight, by mystifying and misleading the enemy, by shaking his morale, by secrecy and surprise creating our opportunity.*

Finally at the favorable moment,

7th. *To strike with all possible violence even to the exhaustion of all our means.*

20. These are the principles of war, and they are of universal application, whether to armies of bowmen and spearmen or to armies of tanks, to fleets of ironclads at sea or to fleets of aeroplanes.

21. In war, these principles govern our action at all times. Thus, when we are halted we maintain our intelligence service (reconnaissance). We cover ourselves with outposts and with protective reconnaissance (to secure freedom of action). We keep these outposts as weak as possible (economy of force), while we make our mainbody as comfortable as possible, to keep it fresh, unshaken, fit for the decisive act (preparation, the blow with all our forces).

22. Similarly during a march, towards or away from the enemy, we cover ourselves with detachments, so that our striking force may march in a sense of security, so that we may have time and space to prepare the blow which we eventually *must* strike, so that we may strike it with full strength, full courage.

23. So also even during the progress of the attack itself we must still learn all we can about the enemy, about the ground and about our own troops and report it (observation, reconnaissance, liaison, intercommunication). We must protect ourselves with observers, with detachments detailed for the purpose, (such as defensive flanks), by organizing in depth to meet the unexpected. We must also constantly fix the enemy, prevent his counter-action, shake his courage, prepare the way, by covering fire. We must in fact continue to ensure for ourselves *freedom of action*. All the time also we must remember our fundamental principle. We must look at things from the enemy's point of view, see with his eyes the place at which he most fears attack. This will usually be his flank or rear. Why ? Because it is a natural instinct of the human heart to fear the danger that comes from the flank or rear especially when one is already engaged in front, to fear the possibility of being surrounded; and because also, in large forces attack from a flank upsets the enemys arrangements, causes him anxiety, hunger, possibly even starvation, creating despondency, paralysing his counterblow.

If the attack comes unexpectedly fear is intensely magnified. It may become terror, panic. A unit or Commander surprised is already half-beaten.

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So also we shall be attacking where the enemy least wishes, if we press our attack at his weak points and waste no force on the strong points. What are his weak points? Those at which we have already penetrated. This is what we call "Soft spot tactics", a most elementary application of the first principle of war.

Finally we must push the attack *with all our forces*. This implies fresh troops, kept in hand. It implies organization in depth; first, to encourage those who go ahead, since the human heart fails if, seeing terrors ahead, it sees not also help coming from behind; and second, in order that we may put in *fresh* and yet more *fresh* troops as the leading lines lose their vitality: fresh troops whom we have brought up with all possible care, in good order, under cover, as fresh, as unshaken as possible, so that they may apply the maximum of force, so that they may enter the battle with a maximum of confidence, of courage.

24. But if the enemy seizes the initiative, if he attacks us, do we then still act on the same principles? Most certainly. We still reconnoitre. We still hold him with detachments, with our fighting front which we keep as weak in troops as possible, increasing its resisting power with guns, machine guns, obstacles, field fortifications, using only such reserves as are necessary to close gaps, to make local counter attacks; employing always as few men as possible (Economy of force). We secure in this way time and space (freedom of action) to collect, to keep *fresh* the mainbody, the striking force, to prepare in security the decisive counter-blow which must be made.

25. Let us open the Field Service Regulations at random. We shall find no sentence, no rule of action which does not react to one of these principles.

These then are the fundamental principles of war. They are "neither numerous nor in themselves very abstruse".

26. "But the application of them is difficult and they cannot be made the subject of rules."

Why is the application of them difficult and why cannot they be made the subject of rules? Because the human heart itself is complex; because the circumstances of war, the position of the opposing forces, their characteristics, their armament, their strength, the incidents of the ground, the weather, all these vary to an infinite degree. No two cases in war are ever exactly alike. *Every case in war is a special case* which must be treated on its merits.

27. What then are these two hundred and more pages of reading matter in the Field Service Regulations? They do not all contain fundamental principles of war. The fundamental principles of war could be printed on a single page. They cannot contain rules of war, since there can be no rules. How then can we explain them?

In this way. If we are to act on the orders which we receive exactly in the way in which our Commander desires us to act, if the Commander is to be in a position to lay his plans with accuracy and precision, if we are to act in harmony with those around us, if we are to rely on them and they on us, we must have not only a fixed organization for the whole army but we must also have a common method, a common system of acting, a common phraseology; so that whoever gives us an order may do so with a general knowledge of how it will be carried out: so that whoever receives an order may understand clearly what is intended.

The Field Service Regulations and our Training Manuals provide us with such a common method of acting in the face of large variety of circumstances such as may occur in a war against an enemy armed more or less with a certain type of weapon, of a certain degree of organization, in a certain type of country. A method which has been "evolved by experience as generally applicable to the leading of troops" and departure from which "has often been followed by mishap". If circumstances are very different we must, of course, largely revise our method. The modifications generally necessary to meet the case of warfare against uncivilized enemies in certain types of

## ***The Principles of the Field Service Regulations.***

country are indeed provided in the Field Service Regulations. But though the method provided in the text books may more or less meet a given case, it can never exactly do so. The method is very elastic, it admits of modifications and it must be modified in *every* case, since *every* case is a *special case*. We can never therefore act entirely from memory, even if memory did not desert us in the stress of the war, nor yet from habit in solving any but the most simple or invariable of problems. We must in every case *think*. We must consider how the common method fits the special circumstances and modify the method on the basis of the fundamental principles of war.

28. It is evident then that we must have, in addition to a common method of acting, a common method of thinking, of appreciating a problem; so that all, being faced with the same problem, would act more or less in the same way. Where is this method of thinking laid down? Nowhere in our regulations. We must therefore evolve a method or, better still adopt a method which has achieved success. Let us then follow the teachings of Marshal Foch

29. Let us first realize that, with the exception perhaps of the supreme commander, every one of us is acting under orders. We have each a task to perform, one definite task and no other. We must therefore be absolutely clear first of all as to what that task is. What is it that we have to do? We must in fact answer the question which Marshal Foch has made so familiar to us;

"What is the problem?"

Having decided this we may then test our problem with the "principles of war" in the order in which we have enunciated them.

Thus "What do I know of the enemy, of the ground and of our troops? Do I know sufficient to make a plan with certainty?" We can never of course know as much as we should like to know, since the enemy also is acting, is always changing his position etc. We must therefore always arrange to reconnoitre and observe.



## ***The Principles of the Field Service Regulations.*** 41

We must then ask ourselves. "What is my general plan?" We may decide to march to a certain place by a certain road, to attack more or less in a certain direction, to resist on a certain line. Then,

"What must I do to guard against the enemy's counter-measures, that is to secure for myself freedom of action?" We can not answer this question without looking at the situation from the enemy's point of view. We must see with his eyes, feel with his heart. This a most valuable practice, a practice too little followed.

Then, "What is the least force that I can use for the purpose of securing freedom of action?" "How can I arrange so that my detachments may remain under my control?"

In a march, a retirement, a defence, a full answer of the above questions may be all that is necessary for the formation of a plan to carry out our responsibilities.

If however our portion of the general task involves attack of any kind we must think also "How must I organize and prepare the attack, so that the blow may be as strong, as violent, as unexpected, as terrifying as possible, so that I may be able to employ *all* my forces, if necessary."

30. We cannot expect, of course, always to have time to review the situation in detail. When in close contact with the enemy a new situation will present itself for solution every moment. In such circumstances practice in the common method of action will save us, for we shall decide subconsciously, as by habit, to act in a manner more or less correct; and a mind well practiced in the common method of thinking will then suggest to us, at times almost instantaneously, the modifications necessary to meet the special case. In the same manner on the football field although every moment presents a different problem for the solution of which there can be no exact rule, yet we keep a certain general formation and act subconsciously on a certain common method while solving consciously though more or less instantaneously

## ***The Principles of the Field Service Regulations.***

ously such highly complicated problems as when and where to pass how to swerve, and when to shoot.

31. But it is not sufficient for the commander to make a correct plan. The plan must be carried out, and correctly carried out. To achieve this we must issue orders, and our orders must be so concise, so clear, so simple that there can be no mistake either in understanding or in executing them. Every subordinate must be given a definite task and a perfectly clear idea of his task so that he can unhesitatingly answer, as regards himself, the question "What is the problem?" We must also give all the information required for solving that problem and carrying it out; that is to say

- (a) news of the enemy,
- (b) news of our own troops,
- (c) the intention of the commander,
- (d) the particular orders for each sub-unit of the command,
- (e) the arrangements for control (report centre).

In order that we may forget none of these, our orders, whether written or verbal, should always take this form and sequence. Field Service Regulations again supply us with a common method.

32. Let us remember however that, in the rapidly changing situations of war, orders can only hold good for a certain time. We must therefore so arrange matters that we can modify our orders, or issue fresh orders when necessary. This implies liaison, inter-communication, extension postponed till the last moment, close and handy formations, limited objectives, movement by bounds.

33. Our action must follow this order;

- (a) clear, correct thinking,
- (b) clear simple orders,
- (c) control retained to the last possible moment.

34. Finally let us remember again in all we do, in all we think, that one fundamental all-embracing principle that "That nation, that commander, that army is only beaten which thinks itself beaten". Let us keep in mind the knowledge that victory depends on skill, numbers, armaments only in so far as these tend ultimately to raise the confidence of our own side, to create despair in the hearts of the enemy.

There is nothing else in War but this: to frighten the enemy into thinking that he is beaten, to resolutely cast out fear from our own hearts and to refuse to be beaten. .

To arrange *everything* with a view to causing the enemy the maximum of discouragement, of fear; while so acting as to create on our own side the maximum of energy, of confidence, of courage. How essential to the leader then above all things is a knowledge and understanding of the human heart. "The secret of victory lies in the *hearts* of men".

## **CAVALRY AND TANKS.**

*By a Cavalryman.*

---

"Read and reread the campaigns of great Captains" wrote Napoleon, but do so, we may add, with the object not only of learning the lessons of the past but also of visualizing the campaigns of the future.

Now it is one of the lessons of the past that War is a progressive Science.

Since the days of Alexander if any vanquished commander had possessed the mechanical contrivances which were in vogue during the subsequent wars he would undoubtedly not have been defeated.

As examples, take the Waterloo Campaign; had the French been armed with the musket or artillery used in the Crimea not all the bravery of the British nor the tenacity of Blucher could have withstood them; or again, had either side been using the machine gun which was employed in Manchuria during the Franco-Prussian War the campaign would have had a different ending.

To obtain therefore the greatest advantage from the lessons of the Late War we must examine the contrivances which were conceived during the struggle and try to visualize their future employment.

The most remarkable of these is, perhaps, the Tank, a contrivance conceived during the War but barely born at the making of peace.

In 1914 the commercial advantages of the moter driven lorry were fully realized, and the value of the tractor-drive was appreciated, but it required the forcing stimulant of war to develop these principles into the "Tank", and although in 1918 the Tank had made great strides the developments effected since the Armistice have been even more remarkable. The tractor-driven vehicle, however, is not yet a commercial proposition, and now that the stimulant of war has been withdrawn we must not allow the progress which has been made to stand still until

	AMOUNT.			TOTAL		
		A.	P.	Rs.	A.	P.
Number	0	0	0			
	0	0	0	5,650	0	0
Deduct	0	0	0			
Trans	0	0	0			
	0	0	0			
Re	0	0	0	1,300	0	0
	0	0	0			
	0	0	0			
	0	0	0			
Add.	0	0	0	1,160	0	0
	0	0	0			
Trans	0	0	0			
Joined	0	0	0	600	0	0
Number	0	0	0			
	0	0	0			
	0	0	0			
	0	0	0			
SIN	0	0	0	11,520	0	0
10th Au	0	0	0			
	0	0	0			
	0	0	0	1,800	0	0
	0	0	0			
	0	0	0	3,000	0	0
	0	0	0			
				562	0	0
				25,592	0	0

SIMLA,  
10th August 1921,

A. FINNIS, *Lieut.-Colonel,*  
*Medical Service Institution of India.*





# BALANCE SHEET.

as at 31st December 1920.

NST  
year

CAPITAL AND LIABILITIES	AMOUNT.		TOTAL.		
	A.	P.	Rs.	A.	P.
<i>Capital Account—</i>					
As on 1st January ...	8	11	10		
Less Balance from Revenue			22,902	0	0
<i>Sundry Creditors—</i>					
Subscriptions received in advance	11	2			
	7	5			
<i>Outstanding Liabilities—</i>					
Prize Competition ...	7	3	2		
Lectures ...					
Electric Bills ...					
Library [Book Binding]					
Office Establishment	2	8	2		
Audit Fee 1920 ...			9,554	11	0
Library Books ...	6	0	0		
Subscription ...	1	9	6		
Journal Account ...					
	77	9	6		
	85	9	6		
			3,741	0	0
	2	8	0		
	32	8	0		
			4,280	0	0
	38	0	0		
	12	8	0		
			2,325	8	0
	71	2	0		
	13	0	0		
	75	0	0		
			4,050	2	0
	12	4	0		
	73	7	0		
	37	8	0		
			623	3	0
	100	0	0		
	100	0	0		
	01	0	0		
	325	0	0		
	525	0	0		
	530	15	0		
			10,055	15	0
	122	8	1		
	55	6	0		
	32	15	9		
			210	13	10
	...	...	58,352	4	10

We have compiled the Balance Sheet and certify that it is in accordance with the books and vouchers submitted to us and certify that it is in accordance with the books and vouchers submitted

WILSON, DIGNASSE & CO.  
Chartered Accountants.

SIMLA.  
8th August 1921.

INSTITUTION OF INDIA, SIMLA

ended 31st December 1920.

INCOME.	AMOUNT			TOTAL		
	Rs.	A.	P.	Rs.	A.	P.
By Government Grant	...	...	...	3,000	0	0
„ Members Subscriptions :-	...	...	...			
Ordinary Members	...	...	...	6,105	0	0
Life Members	...	...	...	1,275	0	0
„ Entrance Fees	...	...	...	7,380	0	0
„ Interest	...	...	...	500	0	0
„ Miscellaneous Receipts	...	...	...	873	14	6
	...	...	...	1,377	10	6
„ U. S. I. Journal :-	...	...	...			
Subscriptions	...	...	...	790	0	0
Advertisements	...	...	...	1,020	0	0
Foreign Postage	...	...	...	60	12	0
	...	...	...	1,870	12	0
„ Periodicals Account	...	...	...	37	2	3
„ Balance carried to Balance Sheet	...	...	...	2,749	11	8
Total	Rs.			16,915	4	5



EXPENDITURE.		TOTAL.		
	P.	Rs.	A.	P.
To Balance on 1st Jan 1920.	...	954	2	3
„ Half-yearly Interest G. P. Notes for Rs. 2,000				
„ Half-yearly interest G. P. Notes for Rs. 4,300				
„ Half-yearly interest of P. Notes for Rs. 2,000				
„ Half-yearly interest of P. Notes for Rs. 4,300				
Total Rs.	...	954	2	3

LIABILITIES.		TOTAL.		
	P.	Rs.	A.	P.
Due to Mint Master for Me Q. M. Havildar ...		3,275	0	0.
Balance of Fund at 1st Jan 1920		954	2	3.
Less on account G. P. N Rs. 6 300 written d from 63 to Rs. 52.				
Less Excess of Expend over Income for the year				
Total Rs.		4,230	2	3

SIMLA,  
8th August 1921.

DIGNASSE & Co,  
Chartered Accountants





the commercial value of the "cross-country tractor drive" is proved and its manufacture becomes a commercial proposition.

Cavalry soldiers must also be particularly guarded against undue conservatism. We must examine this new contrivance with open minds and see if it will help us to win future battles. If so, it must be adopted, studied and included in our armament. If a more efficient weapon for our purposes has been invented then we must ruthlessly scrap those which we have used heretofore be they horse, lance, machine gun or Horse Artillery. Heated discussions on the "Spirit of Chivalry" or "The value of the *Arme Blanche*" have no place with the thinking soldier of today if they will not help us win the battles of tomorrow.

Now the correct balance of "Movement" to "Power" is a very difficult problem.

The South African War was won on "Movement", and in spite of the lessons of the Manchurian Campaign, which were mainly those of "Power", 1914 found the British Army relying principally on "Movement" for victory.

The first phase of the Late War opened with a war of Movement. This was soon brought to a close, and both sides settled down to a battle of "Power". For three years and more everything on the Western Front gave way to "Power", whether by Heavy Artillery, Trench Mortars or cumbersome Tanks. Then, once again, came a war of "Movement" and both the Germans and the Allies were found wanting.

The opening phase of any future war will be one of "Movement" and if we can beat our enemy during the opening phase we may avoid the necessity of resorting to "Power", or, at the worst, be compelled to fall back to Static Warfare after having gained a substantial advantage over him.

Further, in war, Morale is a factor which has a very high fighting value. Now "Power" will breed confidence but Morale must be brought up on the Offensive, on the glories of the charges of the Past, on the Spirit of Movement.

It is better, therefore, during our training, to be obsessed with the spirit of "Movement" rather than the value of

## ***Cavalry and Tanks.***

"Power" and we must be careful, as "cavalrymen," when considering Tanks to keep this importance of Movement always well to the fore.

Now the components which go to make up a Regiment of Cavalry like those of any other arm are:—

Firstly "Movement".

Secondly "Power".

Can this mechanical contrivance, called for the want of a better name a "Tank", be harnessed to Cavalry so that:—

(a) It will enhance our mobility?

(b) Without reducing our mobility, will increase our power?

That is the problem as far as the Cavalry is concerned and to solve this problem we must take each of the components separately and see if the Tank will or will not fulfill our requirements. Slow Tanks, Land battleships for the conveyance of troops, artillery or supplies do not come within the scope of this paper.

The first question therefore is "Will Tanks enhance or hinder the mobility of Cavalry?"

The limits to the mobility of Cavalry are too well known to require repetition.

The following attainments are claimed to be a reasonable statement of the mobility of the present light Tank:—

(a) It can go over fair hunting country with a maximum speed of 20 miles per hour. It can cross a stream the width of which does not exceed 10 feet. It has a radius of some 250 miles from its Supply Depot.

(b) A Tank can find little or no subsistence in an enemy's country but its requirements in fuel are less bulky and lighter than those of the Cavalry. A Tank can carry more ammunition per machine gun than the Cavalry do.

(c) A Tank has a life of some 1000 miles.

(d) Tanks cannot go through woods nor can they ascend mountain paths but they can go over any barbed wire and can flatten out machine gun nests.

- (e) Tanks cannot go across light bridges; to do so they must wait for special bridging material which in these days of M. T. should not delay them long.

From the above it is claimed that light Tanks will not impede the movements of Cavalry; on the contrary, their ability to cross barbed wire and flatten machine gun nests will enhance the mobility of any Cavalry to which they are attached.

This brings us to the second question "Without reducing the mobility of Cavalry will Tanks increase its "Power?" To answer this let us take a Regiment of Cavalry and examine its "Power" seriatim.

Now the "Power" of Cavalry is made up of:—

- (1) Troopers using  $\left\{ \begin{array}{l} \text{firstly "The Arme Blanche".} \\ \text{secondly their Rifles.} \end{array} \right.$
- (2) Mounted troops armed with the Hotchkiss.
- (3) " " " " Vickers.

Taking these components separately.

- (1) Troopers using  $\left\{ \begin{array}{l} \text{The Arme Blanche.} \\ \text{The rifle.} \end{array} \right.$

The campaigns of the past have shown over and over again the value of the Arme Blanche.

In the late War the opening phase in France proved conclusively how high the morale of troops can become if they are trained on the offensive spirit of the Arme Blanche and led to our immediate superiority over the Uhlan. The Palestine and Mesopotamian campaigns vindicated its utility.

The Arme Blanche must therefore be included in our armament, and as the horse contributes largely to the value of this arm it is essential that he should remain with it.

Further, it is also necessary to retain the rifle with the trooper because, while increasing his firepower, it does not hinder his mobility.

The Tank is not able to use the Arme Blanche and therefore our conclusion is that the first component of the Cavalry cannot be replaced by the Tank.

- (2) Mounted troops armed with the Hotchkiss.

## ***Cavalry and Tanks.***

The Hotchkiss was given to Cavalry to increase its fire-power. It is used as a squadron weapon. It has no *Arme Blanche*, but depends entirely on firepower. It cannot come into action while moving. Time and again the Hotchkiss has not been able to help charging squadrons owing to the delay inevitable when men must dismount to fire and mount again to move forward.

Could not the Hotchkiss troop be replaced by the Tank? The disadvantages of such a step would be:—

- (a) Heterogeneity.
- (b) Difficulty of control.
- (c) Loss of fire-power to the Squadron.
- (a) *Heterogeneity.*

It would be impracticable to organise the Squadron with a Tank troop, but it would surely be possible to organise the Regiment with a Tank Squadron.

At the beginning considerable difficulty would be experienced in training the horse to stand the Tank, but this could be overcome.

Further difficulties would be encountered in the assimilation of mechanical knowledge by cavalry officers, because if we have a Tank Squadron all regimental officers must know something about it. These difficulties, it is claimed, are not unsurmountable. Every officer now-a-days has either a motorcar or a motorbike. What better example can be found than the magnificent way in which the 74th Yeomanry Division were converted, within three months, into first class machine gunners. If this can be done by the rank and file surely the task asked from officers is not beyond them.

### *(b) Difficulty of Control*

The control of a Tank Squadron in the field by the Cavalry Regimental Commander presents considerable difficulties. It should be possible to overcome these if the principle be recognised that the Tank Squadron was in every way a squadron of the regiment and orders were sent to it by galloper or by signal as is done to the other squadrons.

### *(c) Loss of fire-power to the Squadron.*

This could be overcome by allotting a detachment of Tanks to any squadron when despatched on an independent mission. At present the Hotchkiss troop is almost invariably retained in the hand of the Squadron Commander. If Tanks were so allotted the difference would be that the Squadron Commander would have, as his reserve, more than the fire-power of the Hotchkiss troop with a further advantage of mobility while in action.

The advantages claimed are (a) Increase of firepower in the regiment owing to the greater number of automatic guns which could be carried by Tanks, and (b) Increase of mobility to the regiment since there would be no delays to dismount or limber up. Further, as the Tank can change its position while in action the pivot upon which the regiment was working could be changed when necessary without temporarily breaking off the action.

This leads us to conclude that, although there are difficulties in the way, the Tank must replace the Hotchkiss troops if we desire to increase the fire-power and mobility of the Cavalry Regiment.

*(c) Mounted troops armed with the Vickers.*

During the late War separate Machine Gun Squadrons were organised to meet the demand for greater fire-power with the Brigade. This organisation has been done away with and each Regiment now includes one Vickers troop with its H. Q. Squadron.

Our remarks on the Hotchkiss troop hold good even to a greater degree as the Vickers troop is inevitably slower in coming into action than the Hotchkiss troop, and it is not the integral part of the regiment that the Hotchkiss troop is at present of the squadron.

*General Considerations.*

*Vulnerability.*

By extensions and quick movement Cavalry can reduce their vulnerability to a considerable extent.

A Tank will always be a good mark for field artillery, and if the Tank is used with Cavalry we must expect the enemy to place Anti-tank guns with their advanced troops.

## ***Cavalry and Tanks.***

It is not claimed that the Tank is invulnerable but it is held that it is not a larger target than the led horses of an M. G. or Hotchkiss gun detachment, while the fact that it can move while in action renders it more mobile and therefore less likely to be hit.

Anti-tank armament is certain to improve, so the Tank, like Cavalry, must rely on mobility for immunity. So long as the armour it carries is sufficient to resist the bullets of the opposing cavalry or machine guns it will be less vulnerable than either a M. G. or Hotchkiss Troop.

### **Economy.**

The supply of suitable Cavalry horses is undoubtedly waning. The expense of upkeep of a large body of Cavalry is great. On the other hand new oil-fields of considerable size are likely to be exploited in the near future while the upkeep of a mechanical vehicle is insignificant compared to that of a horse.

Initial outlay in Tanks would be heavy, but not so large as would be required to put the supply of the vast number of suitable horses on a satisfactory basis for future requirements.

### **R. H. A.**

The question of Artillery on Tanks cannot be discussed in this paper. Until further details are available as to the mobility of Artillery Tanks it is only possible to state that if a sufficiently mobile Tank, armed with a sufficiently heavy gun or howitzer, is forthcoming it should undoubtedly replace the horse as a means of traction.

### **Conclusions.**

The conclusions we claim to have arrived at from the foregoing are:—

- (1) The Tank can be affiliated to Cavalry so that:—
  - (a) It will enhance its mobility.
  - (b) It will increase its fire-power.
- (2) To attain this result the Hotchkiss and Vickers troops should be replaced in the regiment by a squadron of Tanks.



- (3) The Tank cannot replace the *Arme Blanche* and therefore the trooper, mounted and armed as at present, must be retained.

It is suggested that a Cavalry Regiment should be organised as follows:—

H. Q. Squadron or Troop.

3 Squadrons Cavalry, armed with the *Arme Blanche* & rifle.

1 Squadron of Tanks, armed with 24 or 32 Vickers Guns with a proportion of Lewis guns as secondary armament. (Lewis guns are suggested to facilitate interchange of ammunition with Infantry.)

If the principles above enunciated are sound, as it is claimed they are, a beginning in the re-organisation of the Cavalry should take place at once.

By trial, by mutual knowledge and co-operation the numerous difficulties inherent to combining the horse with a mechanical vehicle can be overcome.

The future development of the Tank may modify many of our present ideas of war, but if we wish to keep in line or ahead of other nations a beginning must be made at once.

It is not suggested that the Cavalry force which exists at present, and of which we are justly proud, should be "scrapped" and an untried alternative substituted, but it is urged that the Tank in close conjunction with cavalry should be tried at once and its limitations and possibilities thoroughly tested.

To do this there is no more suitable country than India with its wide spaces, its variety of terrain and its variable temperatures. There is no better time than the present.

The outlay involved in a thorough trial would not be great. The results may be far-reaching.

## **GALLIPOLI IN 1914.**

*By Lt. Col. C. C. R. Murphy.*

If anyone at the outbreak of the Great War had described the Gallipoli peninsula as the key of the whole enemy position he would probably have been accused of putting the wrong end of the telescope to his eye. Indeed, many people would have been startled by such a statement, but perhaps the only startling thing about it is that the pre-eminent importance of this peninsula was not more generally realised.

The allied navies were naturally anxious to try and force the Dardanelles by themselves, but though they were confident of success the Imperial General Staff considered that a purely naval attack would be a risky business. The opinion now most generally held is that even if the allied navies had made the attempt in November, 1914, they would not have succeeded singlehanded, and that by postponing it until the following February they made failure a certainty.

The essential preliminary to the forcing of the Dardanelles was the occupation of the Gallipoli peninsula with troops; in other words, it should have been made a military operation, to be carried out with the assistance of the fleets. But owing to the pressing need of troops on the western front, the Cabinet decided to make it a naval operation without involving the army at all. The writer contends that if the various expeditionary forces, which were sent from India in 1914 to different theatres, had been amalgamated and organised as four complete divisions, and then flung on to the western shores of the Gallipoli peninsula at the earliest possible moment after the wanton Turco-German attack on Odessa on the 29th October, 1914, the Great War would have been over in the spring of 1915.

This may appear to be a sweeping statement, but an attempt will be made to show that, at all events, it is not inconsistent with facts.

Now in order to make what follows as clear as possible, it will be necessary to show the dispositions of the Turkish forces

when Turkey came into the war. The subjoined table, which was prepared at the Ministry of War, Constantinople, will do this:—

European Turkey	...	...	7 Divisions.
Western Asia Minor	...	...	9 „
Eastern Asia Minor	...	...	9 „
Syria and Palestine	...	...	5 „
Hejaz, Yemen, and Asir	...	...	4 „
Mesopotamia	...	...	4 „

---

Total 38 Divisions.

---

There were also five divisions in the early stages of formation. It will therefore be observed that, when Turkey entered lists, *three-quarters of their entire army was in Asia*. In the Gallipoli peninsula itself there was only a portion of *one* division, the 9th, whose headquarters were at Chanak. The landing places, which, by the following April had been converted into veritable death-traps, were in November entirely undefended and unoccupied. If therefore the amalgamated Indian expeditionary forces had been sent to the Gallipoli peninsula in November, 1914, it is highly probable that they could have landed without a single shot being fired. If there had been any opposition at all it could only have been very slight and could not possibly have saved Sari Bair, the Kilid Bahr plateau, and Achi Baba from immediate capture. With these three key positions in our hands, the Dardanelles forts, which are entirely commanded by them, would have been obliged to surrender, whereupon the allied fleets could have passed up the straits at once.

The only Turkish troops which could have been used to oppose our first advance were those actually in the peninsula at the time, namely the bulk of one division. As regards Turkish reinforcements, practically only those troops who were already on the European side would have been available against us because

the command of the Sea of Marmora would have passed into the hands of the allied fleets before arrangements could have been made to transport regiments across from any large garrison centre, with the possible exception of Panderma. Moreover, our troops at Anzac or Suvla were very much closer to the Bulair lines than any one of the Turkish divisions, as will be seen from the following table which shows the dispositions of the Turkish army in Europe on the 1st November, 1914:-

<i>Division</i>	<i>Station.</i>
1st . . . .	Constantinople
2nd . . . .	Hademkeui.
3rd . . . .	Constantinople.
4th . . . .	Adrianople.
5th . . . .	Adrianople.
6th . . . .	Kirk Kilisse.
7th . . . .	Rodosto.

About this time there were six Turkish divisions in transit as follows:—two divisions were *en route* to Panderma from Denizli and Konia; two to the Black Sea littoral; and two to Constantinople from Kaiseriya and Adana. Even assuming that a regiment or two could have been got across from Panderma in time, and that some of the troops in transit could have been diverted to Constantinople, it is difficult to see how more than eleven Turkish divisions could have been concentrated in Europe before the Turks lost command of the Sea of Marmora.

It must not be forgotten that at this time the Turks were very anxious about the attitude of Bulgaria and that they were obliged to keep a considerable force to watch that frontier. This alone immobilized four or five divisions, whilst at least one other was required for garrison duties in and round Constantinople. The maximum striking force immediately available against the peninsula would therefore have been six divisions.

It is contended that, with the allied fleets both in the Sea of Marmora and the Gulf of Saros, the Bulair lines could have been easily held against the Turks. These lines are in fact only tenable by forces having command of the sea, and it is merely necessary to glance at the map to realise what a hopeless task it would have been for the Turks to have attacked them, with our ships strung out along both shores of the narrow isthmus, and taking the Turkish line of advance in both flanks at close ranges for several miles.

With the command of the Sea of Marmora in our hands the Turkish army would have been cut in two, and all their divisions on the Caucasus, Egyptian, and Mesopotamian fronts would have been in the air, with no line of supply. Moreover, a line of communication with Russia would have been opened up, which alone might have turned the scales of war.

There is evidence that Germany and Austria began to think about peace as early as January, 1915. With Turkey down and out in the first round, how long would they have dared to carry on the conflict alone?

## **LIND'S MULTANI HORSE, 1857-59.**

*By Colonel H. R. Goulding, I. S. O., V. D., Indian Volunteer Forces (retired).*

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It was from the old records of the Punjab Military Secretariat, abolished in 1887, that the writer was permitted to collect the material for his paper on the "Genesis of the 32nd Sikh Pioneers," which appeared in the midsummer number of the *Journal of the United Service Institution of India* for 1920. He is indebted to the same source for some interesting information connected with another of the emergency units recruited in the Punjab during the Mutiny of 1857.

On the 9th October 1857, the total strength of the reinforcements raised under the orders of Sir John Lawrence to meet the crisis was 27,625. Of these 12,313 were new regiments and additions to existing regiments, while there were besides 6,985 mounted and 8,327 infantry levies. The former included Lind's Multani Horse, briefly mentioned on pages 76, 80-1 and 351, Volume IV of Kaye and Mallsen's "History of the Indian Mutiny." Brief references to this corps, which ceased to exist as a separate unit after the Mutiny, will also be found scattered about in the volumes of Selections published from the records of the Punjab Government, but a complete account of its early history has been recently found. Among other papers, is a "Journal" in the handwriting of Lieut. J. B. Lind who commanded the corps, giving an account of daily events from the 24th June to the end of December 1857. On this document, there is a note by Sir John Lawrence, "By Lind's account, the Multanees are no end of fellows." Even though their commander may have over-estimated the value of the services rendered by his troopers, it cannot be denied that the British Government owed a debt of gratitude to the faithful men who so readily responded to its call and left their homes to fight for the *sarkar* in a distant part of the country. It seems, therefore, a fitting tribute to their memory to rescue from oblivion the record of their brief but useful career.

Readers of the previous article may remember that it was Colonel Herbert Edwardes, then Commissioner of Peshawar, who first suggested the recruitment of a whole regiment composed entirely of Mazhabi Sikhs. It was he, too, who first suggested that "each of the Resaldars of Mooltanee\* Horse in the Derajat be authorised to double the number of his men from the same race of Mooltanee Pathans, than whom experience has shown we have none so reliable in the Punjab." (*Letter No. B., dated the 13th May 1857, to the Chief Commissioner of the Punjab.*) In a letter to the Government of India, No. 2, dated the 17th May 1857, the Chief Commissioner reported that he had "authorised the enlistment by Colonels Edwardes and Nicholson of 1000 Mooltanee Horse in the Derajat, men whose loyalty and faithfulness has been proved;" and two days later he informed the Government of India that he had "authorised Colonel Nicholson to raise 1400 Mooltanee Horse, of whom 400 will proceed to Peshawar, 500 to Lahore, and 500 will remain at Mooltan." Writing about ten months later to the Judicial Commissioner, (Mr. Robert Montgomery), Col. Edwardes said "I think it must have been on the 16th of May that Sir John Lawrence consented to my raising 1,000 Mooltanee Horse, for before leaving Peshawar for Pindee that evening, I left the orders with Col. Nicholson to be issued in our joint names (for the Khans in the Derajat were as much his friends as mine.) On the 18th of May, however, permission was given to raise 2,000; matters were growing worse each day, and it was now clearly understood by us in council assembled at Pindee that, whatever gave rise to the Mutiny, it had settled down into a struggle for empire, under Muhammadan guidance, with the Mogul capital as its centre. From that moment it was felt that, at any cost, Delhi must be regained." (*Letter No. 64, dated the 23rd March 1858, from Col. Edwardes to the Judicial Commissioner of the Punjab.*)

\*Note. Proper names have been spelt as in the original manuscripts. No attempt has been made to modernise the spelling or to make it uniform.—H. R. G.

No time seems to have been lost in giving effect to the Chief Commissioner's sanction, for it appears from Lieut. Lind's Journal "that the Multani levy, consisting of 460 sabres of all ranks and 250 *pydahs*\*, under Ressaldar Atta Mahomed Khan Nowrunga Khan, Wullydad Khan, and Mahomed Khan, marched from Peshawar on the 24th June 1857 under command of Lieut. J. B. Lind." They arrived at Naushera on the morning of the 26th June and immediately took part in the disarming of the 10th Irregular Cavalry, and the same evening escorted the disarmed troopers to Attock. We learn that a delay of three days was caused by the crossing of the Indus at Attock, but Rawalpindi was reached on the 2nd July. Here the levy halted for a day to be inspected by Sir John Lawrence, "and then proceeded by forced marches to overtake Colonel Ellice's detachment who were proceeding on special duty to Jhelum." They caught up the detachment on the 5th July and two days later took part in the engagement with the mutineers of the 14th Native Infantry. Describing this engagement, Lieut. Lind noted in his Journal that "the part borne by the cavalry portion of the Moultanis in this affair was most creditable to their bravery as individuals and held out great hopes for the future. The Infantry portion, badly armed and but a fortnight enlisted, entered the lines only to be instantly driven out." After giving details of the fighting that followed, in which the Multanis lost 9 killed and 23 wounded†, Lieut. Lind brings to notice the gallantry of "Ressaldar Nowrunga Khan, a Moulteni Chief of some celebrity, who saved my life by cutting down a sepoy who was about to bayonet me." There were also 59 casualties among the horses. On the 8th July, the cavalry (though the horses had not been fed or unsaddled for 33 hours and had had a hard day's work the previous day) were ordered in pursuit, which was continued for over 25 miles. The levy bivouaced for the night and returned to Jhelum on the 9th

\*Footmen or Infantry

†In a later report, Lieut. Lind gave these figures as 13 men killed and 25 wounded, out of 200 engaged. Of the horses, 31 were killed and 28 wounded.  
H. R. G.



and halted for the 10th, but were ordered off early on the morning of the 11th on receipt of news of the mutiny at Sialkot. They reached Gujrat that evening and, having crossed the river to Wazirabad, were ordered to push on to Gujranwala, where they arrived on the morning of the 12th. Their next orders, received at Muridki, were "to push on with all speed *via* Lahore and Umritsar to join General Nicholson." This junction was effected on the evening of the 17th at Batala, where the Multanis received orders to halt "as their services were now less necessary, General Nicholson having beaten the rebels\*. A most needful and refreshing halt was made at Batala till General Nicholson arrived on the 22nd July. The above severe marches had screwed many horses and the General cast 83 on the spot, replacing them with Government horses. The cavalry remarched to Umritsar and was here joined on the 25th July by the infantry of the levy and its baggage "

Leaving 150 infantry at Amritsar, the remainder of the Multani Horse were merged in Nicholson's Movable Column with which they marched to Ludhiana *en route* to Dehli. On the 1st August they formed part of a mounted force detached to intercept the mutineers of the 26th Native Infantry at Hari-ka-pattan, but were recalled before reaching that ferry. Lieut. Lind claimed that they did a march of over 52 miles on the 1st and of 54 on the 2nd August. On their return to Ludhiana, they found that the Movable Column had continued its march, leaving behind the remainder of the Multani Infantry. Lind pushed on after the column, overtook it at Alipur on the 13th August, and his corps formed its advance guard when the march was resumed the next morning.

Arrived at Dehli, the Multani Horse were attached to the 4th Brigade and were employed on duties near the camp. On the 25th August they took part in the battle at Najafgarh, and Lieut. Lind noted in his journal that "the unflinching way the

\*This refers to the action at Trimmu Ghat. H. R. G.

men stood under a heavy fire of grape and shell showed they were becoming veterans." The losses of the corps in this action were two men wounded, three horses killed and two wounded.

During the construction of the batteries, after the arrival of the siege train, Lind's men furnished two pickets, one at the "Yellow House" and the other at the "Gorge." On the memorable 14th of September, they formed part of the 4th column under Major Reid which had been told off to attack the suburbs of Kishanganj and Paharipur. Describing in detail the share taken by his men in the day's fighting, Lieut. Lind mentions that, after clearing a street near the Sabziuandi, he was returning to his original position "when the Guide Cavalry (who had mistaken my men, from their white dresses, to be the enemy) were sent to charge me." Presumably the mistake was discovered before it was too late, for Lieut. Lind says nothing further on the subject. Out of the 300 men who took part in the attack, 2 were killed and 6 were wounded, and there were 7 casualties among the horses.

The next important duty assigned to the Multani Horse was the reconnaissance of the Hindan river, and in connection with this Lind writes "a most unfortunate occurrence took place and one which has done these really brave soldiers inestimable harm. Some thirty of the zamindars amongst them refused to go and their bad example was followed by about the same number," but he adds that, when the troop returned from the reconnaissance, "the refractory portion of the cavalry were thoroughly ashamed of themselves the next day, and it was a pity that their penitence was not put to the proof by ordering them to proceed with Brigadier Greathead's column down country." This, unfortunately, was not the only occasion on which these hastily raised levies showed a lack of discipline. The next engagement in which they took part was in the battle of Narnaul on the 16th November 1857, and their conduct on that occasion is thus described in Kaye and Mallsen's history; "The Multani Horse, new levies, had not displayed the alacrity to come

to close quarters which their comrades on the right had so conspicuously manifested. In vain did their gallant commander, Lieut. Lind, dash amongst the foe. But few at first followed him. Noting this, the Field Engineer, Lieut. Humphrey, who that day acted as Aide-de-Camp to Gerrard, rode up to the hesitating mass, called upon them to follow him, and charged single handed the rebel horse. Then the Multanis followed... .. But the action was over. The right and the centre had won it and the charge of the Multanis, tardy though it was, completed the good work of their comrades". No reference to this hesitation is made by Lieut. Lind either in his Journal or in the official report he submitted after the engagement. On the contrary, his remarks, if untainted by excessive *esprit de corps*, would seem to indicate that the criticisms quoted above were based on inaccurate information. Lind said in his Journal "the behaviour of the Moulthanis on this occasion was very good. They had a very sharp hand-to-hand engagement with the enemy's cavalry, of whom they killed about 30 and drove the rest off the field". In the detailed official report, he wrote "When the enemy limbered up their guns to retire, I ordered a charge and captured two 9-pounder guns. Immediately after this the Moulthanis were engaged in a smart affair with the enemy's cavalry, in which many of the rebels were cut down and finally driven off". An unsuccessful attempt to carry off one of the captured guns is then described and the report concludes with the remark that "the whole Resala indeed showed well in all our hand-to-hand engagements with the enemy and were led by their Khans." One of these leaders, Resaldar Walidad Khan, was severely wounded in the attempt to remove the captured gun. Lind also eulogises the gallantry of Lieuts. Caulfield and Russell who were attached to his corps. The total casualties were 1 man killed and two wounded, and 24 horses.

It may be possible that the prominence given by Kaye and Malleson to one incident may be unfair to the memory of the undisciplined but faithful fellows of whom Lind was so proud

and a sense of justice suggests that their leader's account of what he saw with his own eyes during the course of the day's fighting should be placed to their credit.

After the action at Narnaul, the Multani Horse were employed in scouring the country and in helping to round up and disarm the rebels. On the 29th December 1857 they were at Rohtak, and Lind mentions that Mr. J. S. Campbell, C.S., told him that they were the only reliable troops there. In June 1858, two hundred and fifty of them accompanied General Penny's force and were present at the attack on Kakrala where Lind claims that they captured the only gun taken that day. Subsequently they were attached to General Jone's column and then to Brigadier Coke's. Finally they formed part of the Shahjehanpur field force. Meanwhile, the infantry levies left behind at Amritsar and Ludhiana had been placed under the orders of the Deputy Commissioners of those districts. In February 1859, Lieut. Lind wrote in to the Panjab Government from Shahjehanpur, protesting against the detention of his horsemen in the North-Western Provinces and their further employment on duties which were no longer congenial to their tastes. He brought to notice that "the regiment under my command, though first in the field, have had the mortification of seeing their brethren of the Moultoni Regiment of\* Cavalry pass them *en route* for the Punjab. I would most respectfully state that the Moultoni Horse were embodied in the first instance for service in the Punjab, but, in our day of need, cheerfully proceeded to Hindustan and (with the exception of a few murmurs after Delhi had fallen) have, one and all, done their duty right well without a murmur upto the present day." He went on to quote from a previous demi-official letter in which he had said that his men "positively *pine* to get back and expect to be relieved before Cureton's, as they came down first." "Matters were not improved by the taunts levelled at Lind's men by Cureton's when passing through Shahjehanpur. The Government replied that it was im-

\* 15th Lancers ( Cureton's Multanis ).

possible to fix a definite date, but promised to get them relieved as soon as their services could be spared by the Commander-in-Chief.

The 30th of April found Lind and his men in camp at Anar. kali, Lahore, and on the 2nd May they moved to Mian Mir. The corps now consisted of 5 troops, numbering 493 sowars, *plus* the usual compliment of commissioned and non-commissioned officers and proposals were under consideration for its disbandment. This was effected by the transfer of one or more troops to Cureton's Multanis, and some others were apparently drafted into the Derajat Police Force, but unfortunately there is a hiatus at this stage of the correspondence.

## **WASTED ENERGY.**

### *An essay on Office Routine.*

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There cannot be many officers of more than a few years service, who do not feel that they have and are still wasting hours every day in competing with dull and laborious office routine and that as a result they are unable to concentrate on training for war.

This article is an attempt to work out some suggestions and ideas, which, if adopted, might result in a reduction of the amount of time and energy now spent on mere office drudgery.

It can hardly be questioned that, to obtain quick and efficient work, all routine must be standardised as far as possible. At present to any observer, who has had the good or evil fortune to work in any of the many offices from those at Army Head Quarters through Armies, Districts etc, down to those at the bottom of the scale, the Squadron or Company office, the total absence of any uniform system is too obvious to admit of any argument. It is non-existent.

There are many reasons for this state of affairs, some of them exceedingly difficult of feasible, constructive, criticism, others, which appear to be avoidable.

Financial reasons are naturally the most weighty, but in the opinion of the writer, they are too frequently looked on as being insurmountable and are therefore allowed to stand unquestioned. The fact that time itself has a very real monetary value is usually left out of the question.

Unless the estimated value of time wasted in mis-directed effort is taken into consideration, "costing" estimates lose a very large amount of their value. By taking an actual value of time saved into "costs" really economic results can be looked for with confidence.

The suggestions put forward for consideration come under three main headings:—

- (a) Officers.
- (b) Clerks.
- (c) Equipment.

To work out the ideas correctly, it is better to take them in the reverse order. The most gifted designer can not be expected to produce his best results unless he is provided with efficient craftsmen and unless they in their turn are provided with satisfactory machinery, tools and materials. It would appear to be a complete waste of energy to turn out highly trained Staff Officers and to provide them with an ill-trained staff of clerks with no proper office equipment. Consequently we start with the actual office as a foundation.

*Equipment* can be divided into the following subheads:—

- (a) Housing.
- (b) Furniture.
- (c) Files and Stationery.
- (d) Funds.

*Housing* includes lighting, warmth and hot weather conveniences. The actual housing of the majority of offices with the notable exception of those of Indian units is on the whole comparatively satisfactory. Grants are made for the provision of fires in the winter and for a hot weather establishment in the summer. There are of course a few offices in indifferent quarters but these are the exception.

No provision is made for Indian units and yet the work required from offices of these units differs but little from that of British formations. British officers, with a similar tendency to colds, chilblains and prickly heat have to work under most adverse conditions.

Indian clerks in departmental offices are provided for. The slaves of an office in an Indian unit have to depend for their comfort on the slender resources of a decrepit office fund, which is usually bolstered up by taxes levied on officers of the unit for copies of regimental orders.

This anomaly could and should be altered.

*Furniture* In a series of tours extending over most of Northern and Central India the writer did not come across a single Army Office that could be said to be properly furnished. There

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are a few at Army Head Quarters which appear to be well appointed but a visit to the clerks rooms of these exceptional offices quickly dispels the illusion. No manager of a self respecting business firm would dream of working under such conditions nor would he hope to get efficient work out of his clerks. The lower down the scale, the worse the conditions, until the rickety camp table and the three legged chair of a squadron or company office is reached—the records of the office reposing with spiders, and other vermin in a dirty old yakdan. Small wonder is it that returns are delayed and that answers to letters and urgent appeals are hung up for weeks and months. To effect an improvement money must naturally be spent, but there are possible ways of avoiding any vast expenditure and it should be comparatively easy to devise methods that would ensure money being spent to the very best advantage.

In the first place office furniture should be standardised. File racks, cupboards for spare Army forms, bookcases, tables, etc should be designed in consultation with one of the big firms, either British or American, who specialise in office requisites. Great attention would have to be paid to the peculiar conditions prevailing in India; dust storms and the monsoon, white ants and fish insects receiving due consideration.

Without the co-operation of the Government Printers standardisation of furniture is useless. This point is considered at length under the next subhead.

Once the brain of a specialist has been used to produce designs giving the most efficient and economic results, the actual work could surely be carried out in the Sapper and Miner workshops. Polished walnut and mahogany furniture is not required. Fittings for permanent offices could be made up in the workshops and put together in offices themselves, saving much trouble in cartage.



Furniture for the offices of units could be designed on the principle of heavy camp furniture so that there would be little or no damage from a move. There would of course be a certain amount of permanent office furniture, which would be handed over on relief. Were it possible to arrange for the provision of wood direct by the Forest Department the profits made by contractors and middlemen would be saved.

*Files and Stationery.*

What office table bookrest does not contain a jumble of official pamphlets of varying sizes and thicknesses, difficult to sort out for reference and impossible to keep tidy? What Office Stationery store is not full of a litter of spare or discarded Army forms?

There does not appear to be any insuperable objection to the production of all Government publications in standard sizes, facilitating packing, storing, and binding.

Files are already standardised in foolscap size. The vast majority of Army Forms could be produced in certain stock sizes, for example:— foolscap, half foolscap, and double foolscap with one out size for pay forms.

Forms in constant use such as parade states, sick reports, and many others could be issued in block form as is done for butt memoranda. This would save much trouble in storing and would prevent loss during dust storms.

There are certain forms that are in need of revision or alteration. For example, I.A.F. 1155—Sheet Roll—should be issued properly bound in an outer cover of thick cartridge paper, with a few cut leaves to facilitate the insertion of education and other certificates; in their present forms these rolls will stand no wear and tear and yet have to be referred to constantly, more especially in depot work.

Similarly with I. A. F.Z—2041—Officers record of service—These might even be made up with a thin board cover.

Many other suggestions of the same nature could easily be obtained from units and staff offices.

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The introduction of any new return before the forms have actually been issued to units by the Government Contractors is one source of constant worry and throws a vast amount of extra work on to small offices. This was brought out most strongly during the various alterations in Clothing Accounting. Incidents like this, in addition to creating confusion, produce friction and lack of confidence in the methods of Higher Authorities. Sufficient fore-thought would ensure the issue of the requisite forms before the introduction of any improvement or innovation.

The card index system should be introduced into all offices that deal in any way with the records of individuals or of animals. The amount of time and labour that would be saved in Depot work were an up-to-date card index record available on the unit proceeding Overseas is incalculable.

Full details of the simplest method of maintaining such a record could easily be obtained at the present time were the files of any of the more important record offices that existed in England during the war consulted.

Whether the introduction of the card index system for the filing of all office papers would prove really beneficial in this babu-ridden country is open to argument, but with regard to the registration of individual records there can be no two opinions.

The actual cost of cards would hardly affect the budget estimates. The cost of making up suitable cabinets would come under the same head as that of office furniture.

There are certain forms which could well be replaced by cards with excellent results. Medical history sheets, veterinary history sheets, casualty forms, if replaced by cards would ease work in units, hospitals and base record offices to an enormous extent. Many other forms could undoubtedly be suggested. There is hardly the opportunity in a general article to go into the question in detail.

One point, however, should be emphasised, that is a that all cards should be of a standard size with headings very carefully thought out to combine economy with efficiency.

Few units take full advantage of the excellent stationery and office requisites available for purchase from the Government Printing Press, Calcutta, at prices well below any that obtain in the open market.

This omission is probably due to two main causes. Firstly, that the existence of this department is not advertised in any Government publication as purveyors of stationery. Were a notice inserted in orders from time to time and in each issue of the Army List, units would be saved a considerable amount of money. Secondly, that all Government departments appear to be exceedingly bad selling organisations. The delay in the issue of valuation statements is notorious. Units prefer as a general rule to buy from firms whose accounts are submitted within a reasonable time of purchase.

A considerable saving on stationery would be effected by a revision of the scales of issues. There is an excess issue of certain forms, such as butt registers. A further saving of paper and time would result were all forms issued with a perforation in the top left hand corner for filing tags. The actual amount of paper saved for remaking would amount to a very considerable weight on the thousands of forms that are issued annually—tidy filing would be ensured and much time saved. Other minor labour saving devices could easily be thought out.

*Funds.* None of the suggestions given above have any real effect on recurring expenditure with the exception of the provision of offices, light, fuel and a hot weather establishment for Indian units. This would appear to be such an essential necessity that it need not be taken into consideration in this article. The provision of furniture entails a considerable initial outlay but of this a certain amount must already have been budgetted for to provide furniture for new offices now under construction. A certain amount must also have been allowed for under the heading of repairs. With the undoubted saving on mass production of standard models specially designed for simple construction it would appear that the saving of time and labour added to the increased efficiency should more than compensate for the additional initial outlay.

*Clerks.* This subject can be divided up under the following subheads:—

- (a) Provision and selection.
- (b) Training.
- (c) Pay.

*Provision and Selection.*

Clerks are required for the following:—

Staff offices-Departmental offices-Regimental Offices. Departmental offices are as a general rule filled up with civilian clerks, who come under special rules and rates of pay. These men are frequently employed on very technical work and are in a way specialists. It is somewhat difficult to find a place for them in any scheme which will ensure uniform systemised work. Being civilians, although they have a very exact knowledge of the details of their work, they may yet be entirely ignorant of the ways of the Army or of the difficulties that exist in Army offices, more especially in regimental offices. The new system under which clerks from the Military Accounts Department have been sent to work in unit offices is a move in the right direction as it brings the personal equation into play. To get the best out of this scheme these clerks should only be moved from units when circumstances render a move absolutely imperative.

Under existing circumstances clerks in departmental offices have no opportunity of seeing the inner working of a unit and this frequently leads to misunderstanding. As it seems impossible to bring them into any scheme that fits in with the training of Staff and regimental clerks, it would be of material value if they were posted for short periods to work in Quarter Master's offices of units as part of their preliminary training.

On the other hand Staff and regimental clerks have very similar work to carry out, the difference being one of degree. It is essential that both these classes should be trained soldiers.

Regimental clerks, if real efficiency is to be obtained, must belong to the unit for which they work.<sup>4</sup> Whether the establishment of a corps of clerks, to which all staff clerks would belong, after passing some qualifying tests, would suffice is a matter for

argument. The formation of such a corps might prevent the constant demands on units for trained clerks. This demand was one of the curses of a C.O's existence in India during the War. Were such a corps to be formed one of the conditions of service should be a qualifying period of service with a unit of Cavalry, Artillery or Infantry to ensure a knowledge of local conditions and some degree of personal understanding. Such a formation being a much bigger organisation than the present Unattached lists there would be sufficient opportunities for promotion. At the present time money is saved to Government in a fictitious way by employing large numbers of N. C. O's and men in temporary jobs in staff offices. One result of this evil system is to reduce the actual efficiency of the unit. More highly trained clerks combined with increased office efficiency must result in a reduction of work and therefore in the numbers employed in doing that work.

The question of Indian clerks is a different matter. These clerks are not employed in staff offices and they are usually the weakest link in the whole system as it is at present. They generally suffer from a lack of any real training and are as a rule drawn from the class of the failed B. A. Under the new scheme their prospects are greatly improved and a higher standard of work should result.

*Training.* This, for officers and all ranks, British and Indians is the key-stone of the arch of SYSTEM.

Without efficient training all improvements are doomed to failure. During the war an attempt was made to train Indian clerks. To judge from the two individuals who were drafted as first grade clerks to a unit under the writer's command the results were anything but successful. The men were incapable of drafting a most ordinary letter and their knowledge of Army regulations was elementary.

These clerks schools were a war time experiment carried out under adverse circumstances, and their lack of success cannot be taken as a precedent. It would appear that the first essential of

## ***Wasted Energy.***

any school is to obtain first class instructors, who both know their work and also have the ability to impart their knowledge. How many students at Army schools have suffered under instructors, who, while knowing the details of their work, have not the slightest understanding of the art of imparting this knowledge? The first essential is therefore to train a staff as instructors. It is taken for granted that the necessity for a training establishment is acknowledged. Were all clerks of all units and staffs trained on exactly the same lines there would be an immediate reduction of friction in all office correspondence and, in consequence, far smoother working. Filing would all be done on the same lines, the only difference being the question of quantity. One system could be found to suit all staff and regimental offices. G.A. and Q questions concern them all though not to the same extent. A regimental officer trained to the system would not be overwhelmed if transferred to duty at A. H. Q., when confronted with vast masses of files and cases. Brigade and District clerks would not have to prepare constant reminders for returns that had not been submitted to time nor would letters have to be returned for frequent corrections or alteration. Regimental clerks would be able to put up cases in a form palatable to higher formations and easy to understand.

Owing to the size of the country, there would probably have to be one school in Northern and one in Central India or in Deccan. To ensure mutual understanding each school should contain British and Indian Students. The course of training would naturally be somewhat different for the two nationalities, but it should be possible to devise some common subject on which both could meet. Details of such a scheme are beyond the scope of this article.

The syllabus would include:—

- (a) Filing of papers and documents.
- (b) Details of the Card Index system
- (c) Army regulations and the art of using them.
- (d) Precis writing.

(e) Typewriting. Note. All students before joining the school should have acquired a certain proficiency in typing.

(f) Grammar.

Many other objects could easily be decided on. Extra time could be given to students taking up clerks appointments on the Q. Side. Time so spent would be devoted to questions dealing with Ordnance supplies, Cantonments, etc. A general knowledge of these subjects would however be required of all students.

In addition to the schools, local classes should also be held for training for special appointments dealing with pay. Such classes could be held under district arrangements for British and Indian troops. The advantage to C. O's and Squadron or Company Commanders of having properly trained pay Sowars or Pay Havildars would be incalculable, so far as the Indian Army is concerned.

It might be possible to arrange for the accountants attached to regiments to take these classes, but at present this is outside their actual work and in the absence of express instructions they might object.

*Pay and Financial effect.*

So far as Indian units are concerned new rates of pay have been approved and these should prove satisfactory.

Promotion will however be very slow and some form of sliding scale giving increased rates after a certain amount of service may have to be introduced. Any advance to a higher rate of pay should be naturally contingent on efficient work, thus following the system in vogue in the Military Accounts Department. Small allowances should be given to men under instruction or on probation. Clerking is dull work, more especially in the hot weather when other men have time to themselves. In the British Service there should be special rates of pay for soldier clerks. This should be in the form of an allowance. It should be realised that units cannot carry on with the existing establish-

ment of clerks and that they do not carry on with it. Presumably in every unit there are a number of men employed as being under instruction. Given really efficient training the number of clerks required to carry out the duties would be reduced automatically but until this state of affairs has been reached due allowance should be made for actual requirements.

*Financial Effect.*

The initial cost of establishing two schools properly equipped would be considerable. This is unavoidable. There would however be no necessity for new construction as any vacant set of lines could be utilised.

The only essentials so far as buildings are concerned, are:— Good lighting, lecture halls, and accommodation for the staff and students. There are no outside requirements such as ranges, parade grounds, stabling or garages. The surplus stock of war furniture should provide for all requirements in the way of tables, etc. Suitable sets of standard office furniture would of course be required, but the total cost should not be prohibitive. The recurring expenditure, including the pay of school Staffs and the increased allowances to clerks, would be more than compensated for by the saving in time. After a few years, it would be possible to reduce the establishments of the schools very considerably as the demand for trained clerks would be reduced. It is, however, suggested that they should not be done away with altogether as they would be of the utmost value during war.

Once the actual needs of the Army had been met it might be possible to make them in part self supporting by using them as training establishments for civilian clerks who would always be required for departmental offices.

It may well be argued that the new system of Army Education will in itself produce fully trained and efficient clerks. This may and, it is to be hoped, will result some years hence but the change cannot come about at once.



No standard system for the training of clerks in their special duties has yet been evolved. Instructors are not working on any clearly defined lines and there are many different filing systems, all of them efficient in themselves but which result in difficulties if mixed up with others.

Mass production is a working proposition only when standard models are adopted. Unless one system is standardised for the Army existing confusion and waste must continue. It is with this object in view, that the suggestion for the formation of a special training establishment is advocated.

### *Officers.*

The only point requiring investigation is that of training. Theoretically, officers who have passed through a cadet college are supposed to have acquired a thorough knowledge of interior economy. At times this knowledge is somewhat superficial. It should not be difficult to include a certain amount of training in office routine into the cadet college course. All officers should be given the opportunity of working in a Quarter Master's office early in their career. This would give them an insight into the difficulties that exist and would probably save a vast amount of friction later on in life. A large number of officers go through life with the most sketchy ideas on questions of Ordnance or of Supply and Transport.

Were a specially selected officer, who was trained to impart his knowledge, and who was provided with a really efficient demonstration outfit, sent round to give a series of lectures on the subject of filing, production of reports, reasons for Army returns and other matters connected with office routine, the results could hardly fail to be amazing.

Special lectures could be arranged for C. O's and 2nd In Commands, others for Adjutants and Company or Squadron Commanders, others for more junior officers. Without a good demonstration outfit to show the right and the wrong way of doing things, these lectures would be wasted.

## **Wasted Energy.**

At District Head Quarters lectures could be arranged for Staff officers, though such are presumably trained in office routine at the Staff Colleges. A series of three or four lectures to each group would probably be sufficient.

### ***Conclusion.***

The introduction of any reform is usually heralded by the formation of a committee consisting of most senior and efficient officers. It frequently happens that these officers are so efficient that they have soared for years above the more intimate details of the subjects under discussion. The result is the production of a scheme which, theoretically, is perfect but which, in practice, is unworkable owing to the omission of some very small but essential working part. Were any reform of Army office routine contemplated, it is suggested, that before any action were taken at Army Head-Quarters, District Committees should be called on to submit reports and suggestions; such committees to have a Second Grade Staff Officer as President. No member should be above the rank of Major and all members should have held or be holding the appointments of Adjutant or Quarter Master. One selected Chief Clerk, Orderly Room Sergeant, Quarter Master Sergeant and a Head clerk of an Indian unit should attend the committee as technical advisers.

The reports of these committees should provide a sound foundation on which to build the most necessary reform.

The final suggestion is a plea for propaganda. The need for the vast numbers of reports and returns that have to be submitted by units is not apparent to units themselves. Were a short pamphlet written and circulated to units, explaining the vital importance of each return and showing that there was no overlap of information, units would feel that time spent in compiling such returns was not being wasted. The necessity for certain returns is obvious to all. There are, however, a few, the need for which is not patent to the uninformed.

## **A NOTE ON THE FUTURE ORGANIZATION OF THE AUXILIARY FORCE INDIA.**

*By Lt. Colonel G. K. Walker, C.I.E., O.B.E.*

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In exercise of the powers conferred by section 29 of the Auxiliary Force Act the Governor General in Council has been pleased to constitute certain Corps and Units.

The Corps and Units thus constituted provisionally in the first instance are those which existed in the old Volunteers and the Indian Defence Force with the addition of an Auxiliary Officers' Corps and an Auxiliary Signal Corps.

In some cases these units consist of widely scattered detachments existing in one or more military areas. Members of the Auxiliary Force residing in one place may belong to different units, administered in some cases by different Commands. In small stations this is a particularly inconvenient arrangement. Lack of cohesion and administrative difficulties must occur under such a system and moreover the organization is unduly expensive.

It appears to the writer that a more effective organization from both a military and a financial point of view would be to adopt the organization now described. The outline of such an organization is shortly to constitute the Auxiliary Force on a basis of military areas with the District or Brigade area as the unit. Each local unit of the auxiliary force would thus be a mixed force under the orders of the District or Brigade Commander as the case may be. Local contingents of the Force would be named after the District or area to which they belonged and be termed viz:—

The Lahore Auxiliary Corps.

The Lucknow Auxiliary Corps.

The Poona Auxiliary Corps.

The Bombay Auxiliary Corps.

and so on.

## ***Future Organization of the Auxiliary Force India.***

Each corps would consist of units according to the possibilities of recruitment, as follows :—

- (a) Officers Training Corps for Indian Army Reserve Officers.
- (b) Infantry Companies.
- (c) Cavalry Troops.
- (d) Light Motor Patrols.
- (e) Artillery Companies.
- (f) Engineer Companies.
- (g) Machine gun Companies.
- (h) Signal Companies.
- (i) Cadet Companies.

Railway units would be kept separate.

The Advisory Committees would be consulted as to the units which would be most popular and suitable, and constitute the units after due enquiry and the Commanding Officer of the Auxiliary Corps would, under the direction of the local military authorities, utilise the personnel at his disposal in the most convenient way from the point of view of training and effectiveness, at the same time considering its wishes and qualifications as far as possible. The Officers Training Corps would, so far as circumstances permitted, be a self contained unit available for internal defence with the other units. The Officers comprising it could be graded in categories denoting their availability for mobilisation in consultation with the Local Government or the employers concerned.

The headquarters of each Auxiliary Corps would be usually the headquarters of the District or Brigade area concerned and the headquarters establishment would comprise a Commandant who would be an officer of the Auxiliary Force with rank from full Colonel downwards according to the strength of his Corps. He would be assisted by an Adjutant or Brigade Major who should be an officer of the regular army with staff experience.

In the event of the Corps being very strong it might be necessary to provide it with a Staff Captain in addition to look after the records and deal with administrative details.

Each unit would have the establishment of Officers justified by its strength. Adjutants of units would usually be Auxiliary Force officers who should be given allowances for the work involved. The scale of allowances would be based on the strength of the unit concerned. In very strong units full time adjutants might be required.

Transfers between units of a Corps would be arranged by Auxiliary Corps Commandants and transfers between Corps would be arranged through District or Brigade headquarters.

The objection that units would lose their identity and consequently their "esprit de corps" could be met by allowing units to retain their old titles provided they were sufficiently strong numerically, thus:—

Behar Light Horse (Bihar and Orissa Auxiliary Corps).

The Madras Guards (Madras Auxiliary Corps).

The Rangoon Garrison

Artillery Company (Burma Auxiliary Corps).

Other units not hitherto classified would be termed:—

Signal Company (Lahore Auxiliary Corps).

Machine Gun Company (Peshawar Auxiliary Corps).

and so on.

The above rough outline of a revised organization for the newly constituted Auxiliary Corps would appear to have many advantages as regards the coordination of training and also from an administrative point of view. It would allow of the employment of the minimum number of permanent staff possible and would thus be economical. A central organization dealing with the Auxiliary forces available in each military area and keeping close touch with the central military authority would be able to provide mixed forces for mobile columns and for internal defence in an emergency and thus utilise the services of a body of trained men in the most effective way.

**THE LOST BATTLES OF NAPOLEON.**

*By R. E. G.*

In studying the campaigns of Napoleon one cannot fail to be struck by the surprising degree of inequality of tactical skill displayed by him in some battles in which he personally commanded; at one time soaring conspicuously above his opponents and on other occasions being apparently frankly out-generalled. In this attempt to account for some of these apparent anomalies it must be understood that it is only lost battles, and not lost campaigns, that are the subject of investigation; and also, only those battles are considered in which Napoleon commanded in person.

The climax was surely reached at Waterloo, where, as Marbot describes it, the French were manoeuvred "like so many pumpkins" and where Napoleon persisted in attacking the English, with altogether inadequate forces, having previously sacrificed in vain the majority of his cavalry, while the Prussians were hammering on his right flank and rear.

It is true that several writers, among them Yorck Von Wartemburgh, have professed to see in Napoleon's campaigns a gradual deterioration in military abilities, counting from perhaps the period of Jena (1806). But this deterioration is hardly proven by facts; the campaign of 1814 has been considered by most experts a marvellous piece of generalship, and was pronounced by Wellington to be his masterpiece: while the opening days of the campaign of 1815 and the battles of Charleroi and Ligny have commanded universal admiration. Allowing that Napoleon was not the same man physically at 46 (his age at Waterloo), that he was ten years earlier, he was still a strong robust vigorous man, and some other reason seems called for, distinct from mental deterioration, to account for his lapse at this battle.

It is proposed however to consider the lost battles from a more general point of view; and for this purpose it is necessary to briefly summarize the campaigns in which Napoleon com-

manded, and to point out what may be called decided reverses or defeats, and to deal briefly with each separately—minor checks or defeats are not dealt with.

The campaigns in which Napoleon commanded in person, and the severe defeats which he personally suffered are as under:—

*Italian Campaigns 1796-7.* (No severe defeats).

*Egyptian Campaign 1798-9.* No defeat in battle.

A severe check at St: Jean d "Acre" where he was obliged to raise the siege; cause—in-sufficient resources, and skilful and courageous defence. The check was unavoidable, and retreat necessary to save the French Army.

*Campaign of Marengo, 1800.* No severe check where Napoleon commanded in person.

*Campaign of Austerlitz, 1805.* No defeat where Napoleon commanded in person.

*Campaign of Jena, 1806.* No defeat.

*Campaign of Eylau-Friedland, 1806-7.* No defeat; A drawn battle, but in favour of the French, at Eylau.

*Campaign in Spain 1808-9.* No defeat where Napoleon commanded in person.

*Campaign in Austria, 1809.* A severe check, almost a defeat, at Essling.-Aspern. After two days battle, the French retired into the Island of Lobau. The cause was bad communications and broken bridges behind the French on the second day. No other defeat where Napoleon commanded in person.

*Campaign of Russia, 1812.* The campaign was totally lost by Napoleon, but it can hardly be said that the French sustained many defeats in battle. If any, that of Malo-Jaroslevetz was more of a check, compelling the French to move off their intended

## ***The Lost Battles of Napoleon.***

line of retreat. That at Beresina was aggravated by broken bridges: otherwise it would count as a tactical success for the French.

*Campaign of Germany, 1813.* Napoleon in person suffered two severe defeats in this campaign. One near Dresden after a victorious two days' battle, where he decidedly defeated the allies, but having left Vandamme unsupported near Pina this General was captured with nearly his entire force of 30000 men by the very forces whom Napoleon had just driven off in rout. Although Napoleon was not personally present at Vandamme's battle, the disaster must largely be attributed to Napoleon, who took no efficient steps to support Vandamme with troops from Dresden. It seems reasonable also to consider this combat as part of the battle of Dresden, as the force operating under Vandamme was intended to co-operate with the French in and immediately round Dresden, and with proper arrangements, was within supporting distance.

Another defeat, this time an almost annihilating one, was shortly afterwards suffered at Leipzig; here again the battle lasted during three days; on the first and second days things did not go so badly for the French, although no great success was scored by them either; honours and losses were pretty near equal, and the battle had the appearance of a draw: the allies however were continually adding to their forces, while the French had no reinforcements to look to; a retreat to the Rhine was still open to the French during the early part of the third day: Napoleon however remained on and no arrangements or orders for a possible retreat were given, the explanation given by Napoleon's Chief of the Staff being that without a written order from Napoleon he could not take the responsibility: the result was, that when at last the French were driven to retreat by overwhelming numbers, the existing bridges,—which might have been duplicated, but were not,—proved quite inadequate for the retreat of the French Army.



To aggravate matters, one of the lesser bridges broke down under the crush, and finally, the main bridge was blown up prematurely by the French, the sergeant in charge of the demolition apparently thinking that all the French troops had passed. The result was that practically the whole of one corps remained behind as prisoners to the allies. Altogether the losses to the French resulting from these battles of Leipzig amounted to close on 100,000 men, including 30 Generals, 33000 rank and file and 260 cannon captured. Besides which it eventually entailed the loss of numerous and strong French garrisons left behind in other strongholds in Germany. It is true that an earlier retreat would not at the time have affected the fate of these latter; but Napoleon would have avoided the majority of his losses in battle at Leipzig, and saved the enormous losses in prisoners directly due to the third day's battle, and so at least have preserved a still formidable army. As Wellington says, (quoted by Rose) "If Bonaparte had not placed himself in a position which every other officer would have avoided, and remained in it longer than was consistent with any ideas of prudence, he would have retired in such a state that the allies could not have ventured to approach the Rhine".

*Campaign of France, 1814.*

The defeats suffered by Napoleon in person were:—

(1) La Rothiere. This was a pure case of vastly disproportionate numbers: the defeat however was not a very severe one, the French losing about 3000 prisoners and some guns, but making good their retreat.

After this followed a succession of surprising victories for Napoleon, which conclusively prove him to have in no wise deteriorated in mental or physical energy from the old Bonaparte. Inadequate forces and lack of reinforcements however rendered these victories quite indecisive.

(2). Laon. This must be reckoned the second severe defeat suffered by Napoleon in person in this campaign. Blucher was strongly posted in the formidable position of Laon, whither he had retreated and effected a junction with Bulow, after sustaining several severe knocks; Napoleon attacked; but Blucher's numbers and position were too strong; and Napoleon withdrew after suffering severe losses. The causes of defeat were inadequate forces and strong defence by the enemy.

(3). Arcis. The allies attacked with overwhelming forces and drove the French from their positions. Nevertheless Napoleon was able to effect his retreat without very heavy losses.

This was the last important action in which Napoleon commanded in person in this campaign; a few minor successes and several severe defeats were still the portions of his Marshals, but with these we are at present not concerned. The next, and the last, campaign to be dealt with is that of Waterloo, (1815).

The most remarkable feature of this campaign is that from the start of the fighting till the conclusion of Waterloo it occupied only four days.

On June 15th Napoleon surprised and defeated a Prussian Corps at Charleroi. On the 16th Napoleon fought and won the battle of Ligny against a somewhat larger Prussian Army. On this same day Ney fought the English at Quatre Bras, but was unable to dislodge them. On the 17th Napoleon despatched Grouchy with some 35000 men in pursuit of the Prussians; but the decision was taken too late to prevent the Prussians having a long start, and Napoleon's orders to Grouchy were not very clearly put; the same evening Napoleon in person headed the pursuit of the English, who had vacated Quatre Bras and retired to Wellington's chosen field of battle. On the 18th was fought the battle of Waterloo.

It will be seen that the total exertions displayed by Napoleon practically amounted to a four day's continuous battle, with the battle field shifting.

As to Waterloo, the details of this battle are too well known to make recapitulation necessary. We have already briefly touched on some of the more important points, and Marbot's opinion has been given. Wellington's summary was that, "Bonaparte did not manoeuvre at all: the French came on in the old way, and were repulsed in the old way". It is difficult too to find even any French writer of military repute who has any admiration for Napoleon's tactics in this battle. It may be noted however, that the strengths and compositions of the opposing forces, at the outset of the battle, were not such as to preclude chances of a French victory: though Wellington had some 15 per cent superiority in numbers, Napoleon had a decided superiority in cavalry, and a fifty per cent superiority in Artillery. And even later on, when the Prussians appeared on the French flank, Napoleon was not so outnumbered that he could not have made good his retreat: he had on previous occasions extricated himself from positions just as serious.

These remarks must not be understood as implying that the campaign could ever have been won by the French: the disparity in numbers was too great for that.

Clauzewitz has laid down that there is a limit to disparity in numbers beyond which the most skilful generalship will not avail against the medlocre, and puts this at 2 to 1, quoting many of Napoleon's battles as examples; at Waterloo, with the Prussians, the allies were perhaps  $1\frac{1}{2}$  to 1 as compared with the French: but with the whole Prussian and English forces joined the superiority would be nearly 2 to 1; and this juncture would have been most difficult to prevent; nevertheless Napoleon could have saved the bulk of his forces, and perhaps gathered in some reinforcements and carried on a defensive war.

To elucidate matters more fully, a few words are necessary as to the staff work under Napoleon. Napoleon, when present, always acted as the General in Chief Command; his

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Chief of the Staff, from almost his earliest battles, up to the end of the 1814 campaign, was Berthier: Berthier however was rather a first rate clerk and drafter of orders, and never seems to have taken direct responsibility on himself to issue orders when Napoleon was present. There seems to have been no very well organised staff such as exists in modern armies: the junior staff officers were more in the nature of smart aides-de-camp, who could be trusted to convey instructions and explain them and make accurate reports also; Napoleon was in the habit of keeping at his side some of his most trusted marshals, who might have no distinct command, but would be utilized to take over, during a battle, the complete conduct of some special operations, the troops engaged in it being for the time under their orders.

In 1815 Berthier was no more, and his place was taken by Soult, who though not so efficient as a clerk, was one of the ablest fighters among the French Marshals. It will be seen that the work of Chief of the Staff was hardly, if at all, lighter than what the Emperor imposed on himself; and no one not of extraordinary physique could efficiently perform it.

A resume of the lost battles will show that the only really severe and disastrous ones were those at Dresden, Leipzig, and Waterloo. All the others may be considered as minor ones, are explainable on the score of disproportionate odds, and moreover retreat was made good.

A remarkable fact comes out: that all the disasters of major importance and which were aggravated by apparent obstinacy, carelessness, or lack of tactical skill, were incurred in multiple day battles. Dresden and Leipzig were each of three days duration, while Waterloo, as shown above, may be regarded as the culmination of a four days battle; whereas the minor defeats, as enumerated, of which the consequences were small, were incurred in single day battles.

The conclusion which suggests itself is that the fundamental cause of these really disastrous battles was sheer physical

exhaustion, drowsiness, and lack of sleep, on the part of Napoleon and his Chief Staff Officers. There is abundant evidence that on the last days at Dresden and Leipzig Napoleon was utterly exhausted, and at Waterloo it was remarked by several eye witnesses that he could with difficulty keep awake. It is utterly out of the question for a man in such a state of half slumber to successfully conduct a great battle, and give the instructions necessary in case a retreat has to be effected. Although Napoleon had a remarkable faculty for doing without sleep for considerable periods on occasions, it is evident there must be a limit to this. The exertions which Napoleon underwent in the Waterloo campaign left him very little time for sleep at all, and the same may be said of Dresden and Leipzig. True, he had previously won battles lasting three days, as Arcola; but this battle has been the subject of criticism, and it is doubtful if his customary skill was displayed throughout it.

At Waterloo the conduct of the several attacks on the English was intrusted largely to Marshal Ney: now Colonel Lemonnier Delafosse (quoted by Creasy in "Decisive Battles") relates how during the retreat on the night of Waterloo, he came on Marshal Ney at Marchiennes, but found him asleep, and rather than disturb him during the first sleep he had had for four days, he left him and continued on his way.

Thus, the Marshal charged with the chief attacks of the day must have been in a state of almost physical collapse through sheer want of sleep, and it is not surprising under the circumstances if the attacks were ill co-ordinated and resulted principally in a useless slaughter of French troops.

Want of sleep therefore seems the real cause for these three staggering blows to Napoleon; and this explanation seems more natural and more probable than the several others that have been advanced, such as, that at Waterloo he was ill and unable to ride; this has been disproved by the exertions which he had already made, and later

by his escape from the field; that he had largely lost his intellect and energy; disproven by his skill in the opening days of the campaign; that, as some writers aver, Napoleon towards the end of his career became an inveterate gambler, and would never stop until he had staked and lost everything. The campaign usually selected by the supporters of this theory is the Russian campaign of 1812, in which Napoleon certainly lost nearly the whole of his army : but Clausewitz gives as his opinion that the campaign was really undertaken in a careful and methodical manner; that no general could have been more careful of his flanks and communications; and that if in the end the undertaking failed, it failed from reasons over which Napoleon had no control, which were the steadfastness of the Czar, and the loyalty of the Russian people, who refused to be dismayed or make peace even with their capital in the enemy's hands. The disaster to the French was intensified owing to their long delay at Moscow, but this cannot be looked on altogether as a gambler's plunge on the part of Napoleon; it was rather in the hope of securing a peace that he remained on there. Nor is the gambler very evident in Napoleon's character; throughout his life he seems to have disliked games of chance, and if he played, it was more as relaxation, and he never seems to have played for high points.

Thus the occasional lapses into less than mediocre skill, and apparent gross carelessness which we find in the military career of this extraordinary man, beyond doubt the greatest genius and the most resolute leader of his age, can be accounted for in a natural way, without any contradictions in his character, and without in the least detracting from his uniform superiority as a General.

We are led into these considerations from the fact that the question of pure physical exhaustion has not, it is believed, received the attention from historians that it deserves: generals have too often been treated in history as pure machines, to be

set in motion at the commencement of a campaign and to work at top speed till the end: any failure to keep up to the highest standard set by themselves is attributed to degeneracy, carelessness, over-confidence, or some similar cause. In the case of Napoleon in particular this way of treating events has landed the theorists in a maze of contradictions; such as, that he had already degenerated at the time of the Russian campaign, though he immediately afterwards excelled himself in his success at raising a new army; that he was outgeneralled by Blucher in 1813, which in view of their respective achievements, both before this and afterwards, has every appearance of improbability and is not in the nature of things; that his conduct of the Russian campaign, and the battle of Leipzig, among other events, show him as caring nothing whatever for the lives or fate of his soldiers, though he was straining every nerve to enrol and train fresh troops and make good his losses, and was sufficient of an expert to prefer seasoned soldiers to raw recruits; finally, that by the time of the Waterloo campaign, he had according to some, almost completely lost his abilities, according to others, that his abilities were as good as ever, but that he could scarcely move owing to ill-health, the diseases he was suffering from being moreover given as different by different writers; none of which theories will bear close scrutiny on considering the ability and amount of physical energy displayed by Napoleon in this campaign. Again, we have the theorists who maintain that responsibility for the disaster of Waterloo rests largely with Soult, owing to his alleged ignorance of the duties of Chief of the Staff. Such critics overlook the fact that Soult himself had been in independent charge of many highly successful operations and even campaigns, and that he must necessarily have been thoroughly conversant with the duties of high command including those of Chief of Staff.

Others again, put the blame largely on Grouchy, for not keeping back the Prussians, or intervening between them and

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the English; these overlook the fact that with 30000 to 35000 men it would be impossible for Grouchy, following the Prussians, to break through them, who numbered about 80,000; and that as to interposing, the Prussians had a very long start, and would in fact themselves use the quickest and most convenient roads to get in touch with the English; further, that as a matter of fact, Grouchy's operations were not barren, since he engaged and kept in action at Wavre a Prussian Corps about equal to his own.

We believe that the real reason for the disastrous mistake and failures enumerated among the lost battles lay in absolute drowsiness caused by over prolonged high tension and lack of sleep, in fact temporary physical exhaustion, on the part of the great commander and his staff, the evil results of which were aggravated by the highly concentrated system of authority which prevailed, which prevented any subordinate commander, so long as the Emperor was present, from making any decided alteration in the orders or instructions issued.

Even at the catastrophe of the Beresina, the neglect to use the bridge during a whole night, while it was available, and which added so enormously to the losses, may, without being ascribed directly to drowsiness, be attributed largely to a very similar cause, namely, the intense cold numbing the mental faculties, and which may have had its influence on some other events in the Russian Campaign of 1812 as well.

So much for the part acted by purely physical exhaustion in the case of a great commander, and its result on the fate of nations.



## **REVIEWS.**

### **"The Great War in 1914".**

*By Lt-Col F. R. Sedgwick C. M. G., D. S. O.*

(LONDON, FORSTER GROOM & CO, 10/6d NET.)

Colonel Sedgwick's work fills a notable gap in the military history of the late war so far produced, by affording a concise study of the strategy of both sides on all fronts in Europe during the first five months of the war. The preponderance of British and French literature has up till now concerned itself rather with the western front, a natural consequence since it was with that front that England and France were almost entirely occupied until 1915.

The author is sufficiently well known as a military instructor to need no introduction. His opening chapter deals with the causes of the war, the relative strengths of the combatants, and the main considerations affecting their comparative military efficiency. It is full of shrewd observation and admirable as a precis. In discussing the information we yet have from German sources one reads:—"Unfortunately German military writers are following the stupid old habit, which seems to have become engrained in them, of claiming perfection for their Army from top to bottom.....This is due to a mental outlook which we British cannot understand and never will understand." As a minor matter, the frequent unpopularity of the Staff, to whom the author gives the fullest credit for their work, is analysed in two pages in which the advice, if followed in all the quarters it concerns, should abolish for ever this sorry if rather trivial bone of contention.

The ensuing chapters are devoted roughly each to one major phase of the campaign on each front in turn. The brief but clear exposition of the momentous events on the Russian and Austrian fronts enable one to follow the strategic sequence clearly; and the consequent effects in the west, which were realised by few save the Commands and Staffs in western Europe at the time, can be followed with ease. At the conclusion of the actual battle

of the Marne the author pauses for a chapter of "general observations": the strategic situations at the critical dates on the main fronts are commented upon, with the aid of simple diagrams. Amongst the observations it is interesting to note that Col. Sedgwick does not hold at all with a certain school of French thought which prophesies that future wars will be wars of machinery alone:—"...Wars will be won in the future as in the past by men, aided by machines of course, but not displaced by them. Successful anti-measures to the tank will certainly be forthcoming, and antidotes to poison are not difficult to produce...The infantryman will be, as in the past, the deciding factor of battle."

After pursuing and concluding the strategical record of the war to December 1914, there are two chapters, of "Observations" and of "Reflections", which deserve special note. The author's aim as declared in his preface is to prove that the common view that our pre-war preparations were inadequate is a fallacy, and that we suffered only from bad pre-war strategy for which statesmen are responsible. In the main the text supports this; one conclusion arrived at is that "...had the British been able to put eight Divisions into Flanders in September and early October 1914, instead of only one, the Allies would have ended the campaign on the Scheldt certainly, on the Dender very likely, on the Meuse possibly..... all the industrial area of France saved." It may be a controversial point; but there is a theory hypothesized, and there is room for plenty of thought.

The author has no fear of touching on controversies: he imputes to Lord French unreservedly the position of being a beaten commander after Mons and Le Cateau whereas his troops were anything but beaten. He also takes it for granted that the British advance on the 6th of September was unduly tardy; again he infers that the British Command may have been still demoralized: perhaps his sentence that "A whisky-and-soda on an empty stomach after a hard day's work may easily affect a General's

judgement" is unduly pungent; but this is a day of "journalese" and if this lapse detracts from the praiseworthy style of the book the meaning is still there. This is however a trifle.

Taking the book on general lines, it is a distinctly valuable addition to the strategical history of the war and should find a place in every military library. It possesses the merits of being short, extremely lucid, self-contained, and, not an unimportant point, well printed in clear print and supplemented by good maps. In addition to its general interest, it should be a most profitable book for staff college candidates and for officers studying for promotion.

**THE PATHAN BORDERLAND.**

*by C. M. Enriquez.*

---

It is quite refreshing to welcome a second edition of Major Enriquez chatty book on the North West Frontier. He has caught the enthusiasm for the complex but manly nature of the Pathan whilst the romance of the Borderland holds the reader as he peruses the pages of this interesting work.

There is much information in the 193 pages but interest is maintained by a judicious blend of history, tribal customs, descriptive writing and anecdote.

It seems a pity that, when producing a second edition, an effort was not made to bring the subject matter up to date. The statement that it is preferable to drive to Bannu from Kohat by tonga rather than use the rail is more surprising than accurate. So keen a student of Greek influence in the North West of India should surely correct the Greek coinage on page 61 and convert the "Greek soldier" into Pallas.

These, however, are minor points. It is the romance of the frontier and of the frontiersman which is the charm of the book. It is to be feared that the reputation of the Pathan, somewhat tarnished during the great war, fails to attract for the moment. The weariness caused by active service makes Frontier service unattractive. To any one fresh to the frontier, or to the old stager returning there, the book should appeal with its generous enthusiasm and racy anecdote. The illustrations could, without difficulty, be made more attractive and they are a weak spot in the book.

# Journal

OF THE

## United Service Institution of India.

Published under the Authority of the Council.



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# United Service Institution of India

## RULES OF MEMBERSHIP.

**A**LL officers of the Royal Navy, Army, Royal Air Force, Colonial Forces, and of the Indian Defence Force, and Gazetted Government Officers shall be entitled to become members without ballot, on payment of the entrance fee and annual subscription.

The Council shall have the power of admitting as honorary members the members of the Diplomatic Corps, foreign naval and military officers, foreigners of distinction, other eminent individuals, and benefactors to the Institution, not otherwise eligible to become members.

Life Members of the Institution shall be admitted on the following terms:—  
Rupees 75 + entrance fee (Rs. 10) = Rs. 85.

Ordinary members of the Institution shall be admitted on payment of an entrance fee of Rs. 10 on joining, and an annual subscription of Rs. 10, to be paid in advance. The period of subscription commences on 1st January.

Subscribing members of the Royal United Service Institution, Whitehall, London, are not liable for entrance fee while the affiliation rules are in force.

Life members receive the Journal of the Institution post free anywhere, but ordinary members only in India. All members may obtain books from the library on paying V. P. postage.

Honorary Members shall be entitled to attend the lectures and debates, and to use the premises and library of the Institution without payment; but should they desire to be supplied with the Journal, an annual payment of Rs. 10, in advance, will be required.

Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Serjeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 8.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution on or after the 1st October, will not be charged subscription on the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not been returned by the post.

Members or Subscribers to the Journal, intimating a wish to have their Journals posted to any address out of India, shall pay in advance Rupee 1 per annum, to cover foreign postage charges, but Life Members who have left India shall not be liable for foreign postage on Journals.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

## Contributions to the Journal.

All papers must be written in a clear, legible hand, and only on one side of the paper. All proper names, countries, towns, rivers, etc., must, when in manuscript, be written in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., Vol. II., para. 487, and King's Regulations, para. 453.

Anonymous contributions under a *nom-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer, and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *nom-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted, in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published.

Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.

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The General Officer Commanding-in-Chief, Southern Command.  
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The General Officer Commanding-in-Chief Western Command.

### **MEMBERS OF THE COUNCIL, 1921-22.**

#### *Ex-officio Members*

- |  |   |
|--|---|
| 1. The Chief of the General Staff.               | 5. The Quartermaster General in India.                              |
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| 3. The Hon'ble Mr. Denys Bray, C.I.E.,<br>C.B.E. | 7. Col. Sir S. Crookshank K.C.M.G., C.B.,<br>C.I.E., D.S.O., M.V.O. |
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- |   |   |
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#### **\*Members of the Executive Committee.**

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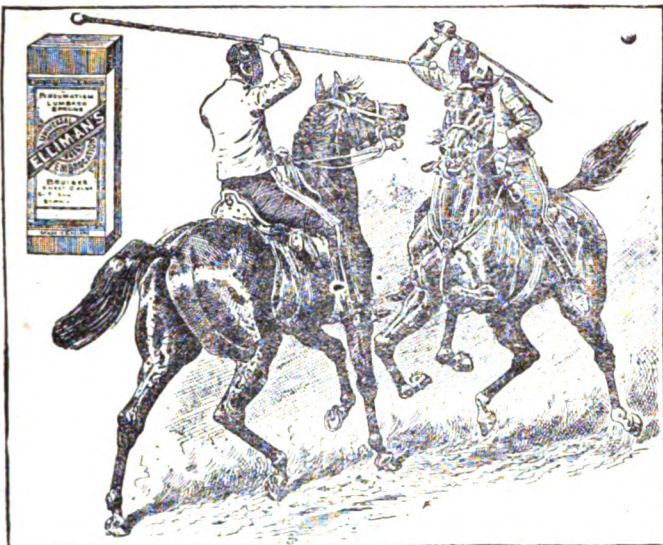
1. The United Service Institution of India is situated at Simla.
2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed on the opposite page.
3. The reading-room of the Institution is provided with all the leading newspapers, magazines, and journals of military interest that are published.
4. There is a well-stocked library in the Institution, from which members can obtain books on loan, free. Suggestions for new books are solicited, and will be submitted to the Committee. Books are sent out to members V. P. for the postage, or bearing by railway.
5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in India and to all life members; but ordinary members wishing to have their journals sent to any address out of India must pay in advance Re. 1 per annum to cover foreign postage charges.
6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found on the opposite page.
7. MEMBERS ARE RESPONSIBLE THAT THEY KEEP THE SECRETARY CAREFULLY POSTED WITH REGARD TO CHANGES OF ADDRESS.
8. When on leave in England, members can, under the affiliation rules in force, attend the lectures and make use of the reading-room, etc., of the Royal United Service Institution, Whitehall, on payment of a subscription of 5 shillings per six months.



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## United Service Institution of India.

OCTOBER 1921.

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5. Reviews

## **SECRETARY'S NOTES.**

### **I.—New Members.**

The following new members joined the Institution from 1st June to 30th September 1921.

#### **LIFE MEMBERS.**

Lieut. R. F. W. K. Allen.	Capt. R. K. Henson.
Capt. R. S. Maloney.	Capt. D. O. Fardell.
Capt. A. J. Sen-Gupta.	2-Lt. R. L. K. Allen.
Major H. Denning.	

#### **ORDINARY MEMBERS.**

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Lieut. A. G. Raleigh.	C. T. Allen, Esqr.
Col. F. M. Wilson.	Col. Comdt. G. H. B. Freeth.
Capt. A. G. Balbernie.	Major P. J. Gibbs.
Capt. W. W. Brindley.	Capt. G. C. Flynn.
Lt.-Col. C. H. Marsh.	Major J. St. A. King.
Capt. G. D. Hill.	Capt. E. D. Metcalfe.
Major L. Griffith.	Capt. D. A. Brett.
Major F. H. Budden.	Capt. A. C. B. Dodd.
Lieut. J. W. Naylor.	Lieut. J. Brookman.
Capt. G. Uloth.	Col. D. G. Pitcher.
Lieut. E. J. Denholm-Young.	Capt. R. F. B. Baynes.
Capt. R. G. Williams.	Lieut. R. O'N. Butler.
Lt.-Col. H. Bowen.	Capt. N. M. Vibart.
Major E. V. Sarsons.	Major C. A. E. Cadell.
Capt. L. S. Coke.	Capt. G. L. Stratton.
Capt. W. W. Bickford.	Lt.-Col. R. M. Luckock.
Capt. H. C. Minchin.	

### **II.—Examinations.**

Books on Military History and Languages with Dictionaries are available in the Library and the following list of books, which is complete in accordance with the War Office list, may be found useful for reference by officers, studying for promotion examinations or entrance to the Staff College.

Those books marked (\*) are not at present in the Library, but have been ordered, the remainder are available for use by members.

## **Secretary's Notes.**

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### **MILITARY HISTORY. (SPECIAL PERIOD.)**

#### **1. *The Campaign of the British Army in France and Belgium up to 20th November 1914.***

##### **A.—OFFICIAL ACCOUNT.**

Sir John French's Despatches.

##### **B.—OTHER BOOKS.**

40 days in 1914 by General Maurice (new edition).

The Battle of the Marne, by G. H. Perris.

1914, by Viscount French.

General sketch of the European War, by Belloc.

The Great War, by Colonel Sedgwick.

My Memoirs, by Ludendorff.

\*Falkenhayn's book.

Von Kluck's book.

British Campaign in France, Flanders, by Conan Doyle, 1914.

Nelson's History of the War.

Ypres, by German General Staff.

Oxford pamphlets. August 1914. The Coming of the War, by S. Williamson.

Oxford pamphlets. August 1914. No. VII and X.\*

Times Documentary History of the War, Vol. V. Military, Part I.

" " " " " Vol. VIII Part III.

\*Dir Grosse Krieg Schlacht bei Mons Longwy.

#### **2. *The Palestine Campaign.***

##### **A.—OFFICIAL ACCOUNT.**

— A brief record of the advance of the Egyptian Expeditionary Force 1919.

##### **B....OTHER BOOKS.**

Allenby's final triumph, by W. T. Massey.

How Jerusalem was won, by W. T. Massey.

#### **3. *Organization of Army since 1868.***

##### **A....ORGANIZATION OF ARMY SINCE 1868.**

History of British Army, by Fortescue.

Outline of Development of British Army, by Genl. Anderson.

Our Fighting Services.....by Sir Evelyn Wood.

##### **B....FORCES OF THE EMPIRE.**

The Statesman's Year Book.

Army List.

Articles in Newspapers and Magazines viz., R. U. S. I.

Army Quarterly, Journal of the U. S. I. of India, etc,

**Secretary's Notes.****4. Development and Constitution of the British Empire.****A. THE BRITISH EMPIRE.**

Encyclopedia Britannica—(Contains much concentrated information).

The Statesman's Year Book.

Whitaker's Almanack.

The Colonial Office List.

\*The British Empire and its History, by E. G. Hawke.

The Government of British Empire, by Jenks 1918.

The British Empire (6 lectures) by Sir C. P. Lucas 1918.

\*The foundation and growth of the British Empire, by J. A. Williamson 1918.

\*The beginnings of English Overseas Enterprise, by Sir C. P. Lucas 1917.

\*The Government of England, by L. A. Lowell 1912.

\*The Future of the Empire, by J. S. Mills 1918.

\*The Expansion of the British Empire, by W. H. Woodward 1900.

\*Overseas Britain, by E. F. Knight 1907.

\*The origin and growth of the English Colonies and of their system of Government, by H. E. Egerton 1903.

\*A short History of Politics, by Jenks 1900.

\*The English Constitution, by Bagelot 1909.

The Expansion of England, by Sir J. Seely 1883.

\*Introduction of the study of the law of the Constitution, by A. V. Dicey 1908.

England in the Seven Years' War, Sir J. Corbett 1907.

\*Selected Speeches and Documents on British Colonial Policy—  
2 Vols. A. B. Keith, 1918.

**B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.**

The rise and expansion of British Dominions in India, by Sir A. C. Lyall 1894.

A brief history of the Indian Peoples, by Sir W. H. Hunter 1907.

\*The Nearer East, by Hogarth 1902.

Modern Egypt, by Cromer 1908.

\*Egypt in the Nineteenth Century, by D. A. Cameron 1898.

\*The History of Canada, by W. L. Grant.

\*The Making of Canada, by A. G. Bradley 1908.

\*Nova Scotia, by B. Wilson 1911.

\*Report on British North America, by Sir C. P. Lucas.

The Union of South Africa, by R. H. Braud 1909.

## **Secretary's Notes.**

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\*The Partition of Africa, by J. Keltie 1909.

Short History of Australia, by E. Scott.

\*History of the Australasian Colonies, by Jenks 1912.

\*The English in the West Indies, by J. A. Froude 1888.

The Lost Possessions of England, by W. F. Lord 1896.

### **5. Military Geography.**

Naval and Military Geography of the British Empire, by Dr. Vaughan Cornish 1916.

Outlines of Military Geography, by Col. A. C. Macdonnell 1911.

Introduction of Military Geography, by Col. E. S. May.

Imperial Defence.....by Col. E. S. May.

\*Britain and the British Seas, by H. J. Mackinder 1907.

Military Geography, by Macguire.

\*Imperial Strategy, by Repington.

\*War and the Empire, by H. Foster.

Historical Geography of British Colonies (Dominions) 7 Vols. by Sir C. P. Lucas 1906-17.

\*Vol. 1 Mediterranean.

\*Vol. 2 West Indies.

\*Vol. 3 West Africa.

\*Vol. 4 South Africa.

\*Vol. 5 Canada.

\*Vol. 6 Australia.

\*Vol. 7 India.

The Influence of Sea Power on History, by A. I. Mahan 1890.

Historical Geography of the British Empire by Hereford George.

The Mastery of the Pacific, by A. R. Colquhoun 1902.

Frontiers.....by C. B. Fawcett 1918.

## **III.—Payment for Articles in the Journal**

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 400 is awarded for articles and reviews published in each Quarterly Journal.

**IV.—Contributions to the Journal.**

With reference to Army Regulations, India, Volume II, paragraph 487, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Institution of India are informed, that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee. Contributors are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

Contributors must have their articles either typed or printed.

2. It has been decided to introduce two new items in the Journal headed—

i. Criticisms

ii. Notes on current Military and Naval questions.

The rules for (i) to be—

That the criticism should be headed with the title of the article criticised, and the date of the Journal in which published.

That criticisms should be signed with a nom-de-plume, but that critics must disclose their identity to the Secretary.

The rules for (ii) to be the same as for Articles.

Instructions for the Preparation of Drawings and Plans for Reproduction by Lithography.

These should be in *jet* black. No washes nor ribands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i.e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

**V.—Library Catalogue.**

Under Revision.

**VI.—Gold Medal Prize Essay 1921-22.**

For subject and conditions please see page viii.

**VII.—Army List Pages.**

The U. S. I. is prepared to supply members and units with manuscript or typewritten copies of Indian Army List pages, at the following rates:—

Manuscript, per page Re. 1.

Typewritten, per page Rs. 2.

**VIII.—Books.**

*Books Purchased.*

<i>Title.</i>	<i>Sec. &amp; No.</i>	<i>Author.</i>
1. At the Supreme War Council.	M. 979 ...	Capt. P. B. Wright.
2. How Jerusalem was won ...	M. 969 ...	W. T. Massey.
3. The Group Mind ...	K. 224 ...	W. McDougall.
4. With the 1-5th Essex in the East ...	M. 972 ...	Lt. Col. C. Gibbons.
5. The 5th Divn. in the Great War ...	M. 973 ...	{ Bg. Genl. Hussey. Maj. D. S. Inman.
6. British Campaigns in the Nearer East (1919) ....	M. 974 ...	Edmund Dane.
7. A Short History of the Great War. Pub: 1920 ...	M. 975 ...	A. F. Pollard.
8. The Prince of Wales' Book, 1921 ...	K. 223 ...	H. R. H. Prince of Wales.
9. Staff College Examination papers for Promotion, 1920 ...	T. 507 ...	Dir. of S. D.

*Books Presented.*

1. Report on the Administration of the Punjab and its Dependencies 1919-1920. Pub: 1921.	Reading Room.	Presented by the Punjab Government.
2. Records of the Geological Survey of India 1921 Vols. No. 42 and 53.	Reading Room.	Presented by Government of India.
3. Professional Paper No. 18 The Structure of the Himalayas, etc. (1921).	R-63	Presented by S. of I. Lt.-Col. Mc C. Cowie, Depy. Supdt. of Survey in India.
4. Army Veterinary Service in War (1921).	W-59	Presented by Major-General Sir J. Moore (the Author).
5. Technical Papers No. 214 and 221, Railway Board of India.	R-R	Presented by Rly. Bd. B. J. Fitch and Extracts from Rly. Gazette.
6. Native Cemeteries, etc. Pub: 1921.	R-R	Presented by Smithsonian Institute. David Bushnell, Author.
7. Annual Report of the Smithsonian Institute. Pub: 1920.	R.-R.	Presented by Charles D. Walcott, Secretary.
8. The War Office List, Administration, etc. (1920) Presented by the Editor.	Q-260	J. R. Wade, B. A.

**Secretary's Notes.****Books Presented.—contd.**

- |  |       |   |
|--|-------|---|
| 9. Official History of the Russo-Japanese War (With maps)<br>Vol. 3 (Naval and Mily.) Presented by the Editor, | M-971 | Prepared by the Histl. Sec. of the Committee of Impl. Defence London. |
| 10. The Angami Nagas, Pub: 1921. Presented by Messrs. MacMillan & Co.  | C-60  | J. H. Hutton,   |

**Books Ordered.**

Allenby's Despatches (16th Decr. 1917 period) ...

Naval and Military Despatches Part VIII ...

The following books have been presented to the U. S. I. Library by Major General W. C. Black, C. I. E., October 1921, Abbotsford, Simla.

**Title.****Author.**

- |  |     |           |                       |
|--|-----|-----------|-----------------------|
| 1. The Science of War                                    | ... | Pub: 1905 | Colonel Henderson.    |
| 2. Small Wars, etc.                                      | ... | " 1899    | Major Callwell.       |
| 3. The Principles of War                                 | ... | " 1914    | Major General Altham. |
| 4. Protection in War                                     | ... | " 1912    | Major General Aylmer. |
| 5. Indian Frontier Warfare                               | ... | " 1898    | Major Younghusband.   |
| 6. The Application of Military History to Modern Warfare | ... | " 1904    | Captain Donaldson.    |
| 7. Staff Rides and Regimental Tours                      | ... | " 1908    | Colonel Haking.       |
| 8. Letters on Cavalry                                    | ... | " 1893    | Lt.-Col. Walford.     |
| 9. Letters on Infantry                                   | ... | " 1892    | Lt.-Col. Walford.     |
| 10. Letters on Artillery                                 | ... | " 1890    | Major Walford.        |
| 11. Modern Strategy                                      | ... | " 1903    | Lt.-Col. James.       |

**IX....Payment of Annual Subscriptions.**

The attention of members is directed to the increase of the Annual Subscription from Rs. 5 to Rs. 10 agreed upon at the General Meeting on 13st September 1920. Many Members who had, prior to this alteration, signed Banker's orders have not notified their Bankers of the change.

A Banker's order form is enclosed in this issue. It will simplify the work of the Secretary, and be of great benefit to the Institution if all Members who have not already done so will sign and return to the Secretary the enclosed Banker's Form.



# Military Widows' Fund, British service.

---

This Fund enables a British Service (Army) officer, by subscribing from Rs. 2 to Rs. 4 monthly, to assure, in the event of his death while on the Indian Establishment, immediate payment :—

To his widow	Rs. 3,900	to	Rs. 5,100
For each child	,, 300	to	,, 500

Payments are made immediately on receipt of report of death, irrespective of death occurring in or out of India.

The sum paid to the widow varies with subscription, and the sum for each child varies with age of child. Subscriptions are based on the pay of the officer.

Benefits are payable whether the deceased officer's family is residing in India or not.

It is to the advantage of an officer to join the Fund on his first tour of service in India, as otherwise, on joining it in a subsequent tour he would have to pay subscriptions for any previous tours in the country as a married officer.

The Fund (late Queen's Military Widows' Fund) was established in 1820, to assist families of British Service (Army) officers dying in India, and mainly to enable them to return home without delay.

The Fund is controlled by a Committee consisting of and elected by subscribing officers serving at Army Head Quarters, Simla.

For admission and rules apply to :—

*The Secretary,*  
MILITARY WIDOWS' FUND,  
Army Head Quarters,  
Simla.

# United Service Institution of India.

## GOLD MEDAL ESSAY COMPETITION 1921-22.

The Council have chosen as the subject for the Gold Medal Essay for 1921-22 the following:—

### INDIA AND THE NEXT WAR.

The following are the conditions of the competition:—

- (1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army, and Royal Air Force or Indian Defence Force who are members of the U. S. I. of India.
- (2) Essays must be printed or type-written and submitted in *triplicate*.
- (3) When a reference is made to any work, the title of such work is to be quoted.
- (4) Essays are to be *strictly anonymous*. Each must have a motto, and enclosed with the essay there should be sent a *sealed* envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1922.
- (6) Essays will be submitted for adjudication to 3 Judges chosen by the Council. When the decisions of the 3 Judges are received the Committee will submit the four essays, placed first in order by the Judges, with their recommendations on the award of the Gold Medal to the Council, who will decide whether the Medal is to be awarded and whether the essay may be published.
- (7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1922.
- (8) All essays submitted are to become the property of the United Service Institution of India, *absolutely* and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (9) Essays should not exceed about 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

By order of the Council,

SIMLA, }

F. A. FINNIS, LIEUT.-COL.,

30th Sept. 1921. }

Secretary, U. S. I. of India.

# United Service Institution of India.

## PRIZE ESSAY GOLD MEDALLISTS.

*(With rank of Officers at the date of the Essay).*

- 1872...ROBERTS, Lieut.-Col. E. S., V.C., C.B., R.A.  
1873...COLQUHOUN, Capt. J. A. S., R.A.  
1874...COLQUHOUN, Capt. J. A. S., R.A.  
1879...ST. JOHN, Maj. O. B. C., R.E.  
1880...BARROW, Lieut. E. G., 7th Bengal Infantry.  
1882...MASON, Lieut. A. H., R.E..  
1883...COLLEN, Maj. E. H. H., S.C.  
1884...BARROW, Capt. E. G., 7th Bengal Infantry.  
1887...YATE, Lieut. A. C., 27th Baluch Infantry.  
1888...MAUDE, Capt. F. N., R.E.  
    YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).  
1889...DUFF, Capt. B., 9th Bengal Infantry.  
1890...MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Contingent  
1891...CARDEW, Lieut. F. G., 10th Bengal Lancers.  
1893...BULLOCK, Maj. G. M., Devonshire Regiment.  
1894...CARTER, Capt. F. C., Northumberland Fusiliers.  
1895...NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.  
1896...BINGLEY, Capt. A. H., 7th Bengal Infantry.  
1897...NAPIER, Capt. G. S. F. Oxfordshire Light Infantry.  
1898...MULLALY, Maj. H., R.E.  
    CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).  
1899...NEVILLE, Col. J. P. C., S.C.  
1900...THULLIER, Capt. H. F., R.E.  
    LURBOCK, Capt. G., R.E., (specially awarded a silver medal).  
1901...RANKEN, Lieut.-Col. G. P., 46th Punjab Infantry.  
1902...TURNER, Capt. H. H. F., 2nd Bengal Lancers.  
1903...HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.  
    BOND, Capt. R. F. G., R.E., (specially awarded a silver medal).  
1904...MACMUNN, Maj. G. F., D.S.O., R.F.A.  
1905...COCKERILL, Maj. G. K., Royal Warwickshire Regiment.  
1907...WOOD, Maj. E. J. M., 99th Deccan Infantry.  
1908...JEUDWINE, Maj. H. S., R.A.  
1909...MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.  
    ELSMIE, Maj. A. M. S., 56th Rifles, F. F., (specially awarded a silver medal).  
1911...Mr. D. PETRIE, M.A., Punjab Police.  
1912...CARTER, Major B. C., The King's Regiment.  
1913...THOMSON, Major A. G., 58th Vaughan's Rifles (F.F.)  
1914...BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs, (F.F.)  
    NORMAN, Major C. L., M.V.O., Q.V.O., Corps of Guides  
    (specially awarded a Silver medal).  
1915...No award.  
1916...CRUM, Major W. E., V.D., Calcutta Light Horse.  
1917...BLAKER, Major W. F., R.F.A.  
1918...GOMPERTZ, Capt. A. V., M. C., R.E.  
1919...GOMPERTZ, Capt. M. L. A., 108th Infantry,  
1920...KEEN, Lt.-Col. F. S., D.S.O., 2/15 Sikhs.  
1921...No Award.

## MACGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June:—

(a) For officers—British or Indian | silver medal.

(b) For soldiers—British or Indian—a silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief as Vice-Patron, and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.\*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.

### Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

### MacGregor Memorial Medallists.

(With rank of Officers at the date of the Award).

1889...BELL, Col. M.S., V.C., R.E. (specially awarded a gold medal).

1890...YOUNGHUSBAND, Capt. F.E., King's Dragoon Guards.

1891...SAWYER, Major H. A., 45th Sikhs.

RAMZAN KHAN, Havildar, 3rd Sikhs.

1892...VAUGHAN, Capt. H. B., 7th Bengal Infantry.

JAGGAT SINGH, Havildar, 19th Punjab Infantry.

1893...BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).

FAZALDAD KHAN, Dafadar, 17th Bengal Cavalry.

1894...O'SULLIVAN, Major G. H. W., R.E.

MULL SINGH, Sowar, 6th Bengal Cavalry.

\*N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves; also those serving in Auxiliary Forces, such as the Volunteers and Corps under Local Governments, Frontier Militia Levies and Military Police, also all ranks serving in the Imperial Service Troops.

### **MacGregor Memorial Medallists—*contd.***

- 1895...**DAVIES**, Capt. H. R., Oxfordshire Light Infantry.  
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896...**COCKERILL**, Lieut. G. K., 28th Punjab Infantry.  
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897...**SWYAYNE**, Capt. E. J. E., 16th Rajput Infantry.  
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898...**WALKER**, Capt. H. B., Duke of Cornwall's Light Infantry  
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 899...**DOUGLAS**, Capt. J. A., 2nd Bengal Lancers.  
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900...**WINGATE**, Capt. A. W. S., 14th Bengal Lancers.  
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901...**BURTON**, Major E. B., 17th Bengal Lancers.  
SUNDAR SINGH, Colour Havildar, 31st Burma Infantry.
- 1902...**RAY**, Capt. M. R. E., 7th Rajput Infantry.  
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903...**MANIFOLD**, Lieut.-Colonel C. C., I.M.S.  
GHULAM HUSSAIN Lance-Dafadar, Q. O. Corps of Guidesa
- 1904...**FRASER**, Capt. L. D., R.G.A.  
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905...**RENNICK**, Major F., 40th Pathans, (specially awarded  
gold medal).  
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906...**SHAHZADA AHMAD MIR**, Risaldar, 36th Jacob's Horse.  
GHAFUR SHAH, Lance-Naik, Q.O. Corps of Guides Infantry.
- 1907...**ANGLE**, Capt. M. C., 92nd Punjabis.  
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908...**GIBBON**, Capt. C. M., Royal Irish Fusiliers.  
MALANG, Havildar, 56th Punjabi Rifles.
- 1909...**MUHAMMAD RAZA**, Havildar, 106th Pioneers.
- 1910...**SYKES**, Major P. M., C.M.G., late 2nd Dragoon Guards.  
(specially awarded a gold medal).  
TURNER, Capt. F. G., R.E.  
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911...**LEACHMAN**, Capt. G. E., The Royal Sussex Regiment.  
GURMUKH SINGH, Jemadar, 93rd Burma Infantry.

## MacGregor Memorial Medallists—Contd.

- 1912...PRITCHARD, Capt. B.E.A. 83rd Wallahjabad Light Infantry  
(specially awarded a gold medal).  
WILSON, Lieut. A. T., c.m.g., 32nd Sikh Pioneers.  
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913...ABBAY, Capt. B. N , 27th Light Cavalry.  
SIRDAR KHAN, Sowar, 39th (K.G.O.) Central India Horse.  
WARATONG, Havildar, Burma Military Police (specially  
awarded a silver medal .
- 1914...BAILEY, Capt. F. M., I.A. (Political Dept.)  
MORSHREAD, Capt. H. T., R.E.  
HAIDAR ALI, Naick, 106th Hazara Pioneers.
- 1915 . WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.  
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916...ABDUR RAHMAN, NAIK, 21st Punjabis.  
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.)  
(Specially awarded a Silver Medal).
- 1917...MAIN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918...NOEL, Capt. E. W. C., Political Department.
- 1919...KEKLING, Lt.-Col. E. H., M.C., R.E.  
ALLA SA, Jamadar, N. E. Frontier Corps.
- 1920...BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.  
AWAL NUR, C. Qm. Havildar, 2nd Bn. Q. V. O. Corps of  
Guides. (Special gratuity of Rs. 200.)
- 1921...HOLT, MAJOR A. L., Royal Engineers. *M.E.S., M.C.*  
SHER ALI, Sepoy No. 4952, 106th Hazara Pioneers.

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**The Journal**  
OF THE  
**United Service Institution of India.**

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Vol. LI.

OCTOBER 1921.

No. 225

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**THE MUTINY DAY BY DAY.**

BEING

EXTRACTS FROM THE LETTERS

OF

GENERAL SIR ARCHDALE WILSON, G. C. B.

TO HIS WIFE:

EDITED BY COL. H. R. NEVILL, C.I.E., O.B.E., I.C.S.

PART VI.

*The Capture of Delhi.*

CXXVII.

*Delhi,*

*21st Sept. 1857, 10 p. m.*

I could not write to you yesterday, but I sent a Telegraph Message to Umballa, to be forwarded through Mr. Spankie to you, I hope this time he will have the grace to do so instead of sending it to his own wife.

Yesterday was a day of intense excitement. Thanks be Almighty God! We have full possession of the Palace and City, with all the Guns and Ammunition on the walls and in the Magazine. The more I see of the strength of the place the more I am astonished at our success. Most certainly to the

***The Mutiny day by day.***

Lord of Hosts alone can be ascribed the Victory. Without His aid in striking a panic into our enemy's hearts, we must have been annihilated. The heavy Bombardment we kept up, and the sure and steady progress we were making in advancing our Posts so frightened the Rebels, that the King, the Rebels, and nearly the whole of the inhabitants bolted on the night of the 19th, leaving us nothing hardly to do but to take possession of the deserted walls and City. As far as I have yet learned, I do not think we lost yesterday more than 4 or 5 men wounded.

My difficulties are only now commencing, I have 3,300 sick and wounded, and my Force is reduced so frightfully that I shall be obliged to disappoint everybody. The Lt. Govr: at Agra is calling upon me to move to his assistance with a large moveable Column. They know I have 7 European Regiments, and immediately put them down as a thousand strong. They are most of them barely 200.

I wish I could have that exultation that every one else seems to have at my present success.

Poor Greatled. How suddenly he has been taken away! He will be a great loss to me at this Crisis.

NOTE.—Delhi was definitely captured on the 20th September. Events followed rapidly on the occupation of the Barn Bastion, which, as Wilson anticipated, proved the key to the whole position. At dawn Brigadier Jones rallied his somewhat disorganised and demoralised column, rushed the Lahore Gate, and then took the Garstin Bastion without loss. By this time opposition along the walls had practically ceased, and Jones was directed to divide his force. He himself followed the line of the walls, occupying the Ajmer Gate and the fortified tomb of Ghazi-ud-din Khan, which contained three heavy guns and one 8-inch howitzer. The King's and the 1st Fusiliers, under Major Brind with his Artillery, proceeded up the Chandni Chauk and attacked the Jamī Masjid, which had been strongly fortified. This was carried without difficulty, and Brind sent a message to the General, pointing out the necessity of seizing the Palace without delay. There were no signs of probable opposition, though shots continued to be fired from Salimgarh. Wilson immediately ordered up the column from the Magazine, and the attack was carried out by the 60th Rifles and the Kumaon Battalion. Seven guns posted in front of the Lahore Gate of the Palace were seized, and then Home, who had been specially selected by the

General for this duty, in recognition of his gallantry at the Cashmere Gate, applied the match to the powder-bags, by which means an entrance was effected. The only occupants of the palace were a few fanatics, who were quickly despatched, and the British flag was then hoisted over the gate.

Meanwhile Lieutenant Aikman with a party of Wilde's Sikhs attacked Salimgarh on his own initiative. Forcing the Calcutta Gate, he approached the main work, whereon the few occupants fled. Thinking to catch fugitives from the Palace, he promptly seized the drawbridge and then proceeded to spike all the heavy guns directed against the Water Gate Bastion. Actually he had possession of the fort by the time the Palace was entered; but the number of rebels who endeavoured to escape by the bridge was small.

Outside the city Hodson with his cavalry had made a wide sweep by the Idgah and occupied the abandoned main camp of the enemy near the Delhi Gate. The remaining occupants, mostly sick and wounded, were put to the sword, and very large booty was secured. The Delhi Gate was open and Hodson rode to the Jami Masjid, there joining hands with Brind's Column.

Wilson took up his headquarters in the Palace, with the 60th Rifles and Kumaon Battalion as its garrison, and immediately took active measures for the security of the city. The streets were patrolled and the walls and bastions put into a state of defence: a necessary precaution, as the enemy were still close at hand in great strength. Baird Smith had by this time broken down, and departed for Simla three days later. Taylor took his place and tackled the problem of defence with such thoroughness that Sir John Lawrence remonstrated, urging that even when the inhabitants returned a few light guns on the Palace walls would be sufficient for all purposes. This was true enough a month later, but Wilson was not inclined to take risks after his victory.

No sooner had Delhi fallen than the civil authorities at Agra began to clamour for assistance. The complaints recorded by Wilson were natural enough. He knew, as the event proved, that Agra was in no immediate danger, and he knew that his duty as a soldier was to secure the fruits of victory. He lost no time in preparations and at once directed the organisation of a moveable column, entrusting the command to Edward Greathed, as Nicholson, the commander-designate, was no longer available. The knowledge that this column must be strong to be effective made him all the more anxious to secure his defences.

The problem of maintaining order was still more serious. Fortunately most of the inhabitants had fled. A great many had been passed out through the British posts prior to the assault, mostly traders, women and children. Otherwise the chances of another massacre in Delhi, recalling those of Taimur and Nadir Shah, were far from remote. As it was, few suffered besides the rebels who remained in hiding. The necessity of making a house-to-house search for

*The Mutiny day by day.*

fanatical murderers had its disadvantages, in that it encouraged plunder, and in a very short time looting became a mania which had to be checked by drastic measures. The danger had been foreseen and by the appointment of prize agents attempts were made to control the seizure of private property. Still it is probable that the amount of portable and valuable plunder removed by the divisions and not reported constituted the major portion of the spoils of the captured city.

On the 21st September the difficulties of maintaining discipline increased. The European force available was far too small, and not all of it could be trusted. The reduction in strength was very serious. From the 6th to the 20th September the casualties were 1674, making a total of 3837 killed, wounded and missing in the operations from start to finish. The 60th Rifles began with 440 of all ranks. They had 389 casualties, and would have been ineffective as a unit but for the reinforcements received on the 6th of September. The 5th Battalion of Gurkhas commenced 450 strong and had one draft of 90 men, while its casualties aggregated 319. The same number of casualties was credited to the 1st European Fusiliers, who arrived some 600 strong, and an even higher proportion was suffered by the Guides.

## CXXVIII.

The Palace, Delhi,

*22nd Sept. 1857, 2 p. m.*

The plot thickens. Yesterday evening the King and his favourite Begum Zeenut Mahul gave themselves up and are now my prisoners. I have not allowed them to return to the Palace, but they are in honourable confinement in Zeenut Mahul's house. To-day Hodson and his Horse surrounded Humayun's Tomb, in which some of the Princes had taken refuge, with nearly all the women of the Palace. Three of the Princes, Mirza Moghul, Mirza Abu Bukr, and Mirza Kizi were taken and shot, the two former have been the most virulent against us. Hodson, as a Partizan Officer, has not his equal.

Tomorrow morning a moveable Column of about 2800 men move in the direction of Muttra, under Colonel Greathed in pursuit of the flying Rebels. If Havelock could only relieve Lucknow and move up this way, the whole rebellion would be

put down, I believe at once. I have sent a party in the direction of Meerut, to my old battle-ground on the Hindun River, to reconnoitre in that direction.

I have not a single moment that I can call my own, and cannot write you long letters, in fact I have more to do than I can perform. I must break down soon, I fear.

Hodson has presented me with the King's sword, matchlock and dagger, I wish I could send them up to your care.

\* \* \* \*

I have just heard the party I ordered to the Hindun—the Mooltancee Horse—have refused to march. You see what materials I have to work with.

NOTE.—The surrender of Bahadur Shah was due to the activities of Hodson and his agent Maulvi Rajab Ali. The old King had been pressed by Bakht Khan to accompany the rebel army and renew the war in the open country; but he had been unable to come to a decision and on the 20th September he listened to the advice of his son-in-law Ilahi Bakhsh Mirza, and Bakht Khan, who for fear of pursuit was forced to move, had to leave the Royal Family behind. Rajab Ali entered into communication with the Mirza, but Hodson had a far more difficult task in persuading the General to spare the life of Bahadur Shah. The promise was extracted after long argument, for Wilson had determined to treat this pensioner of the Government as a rebel and a murderer. Hodson then went off with fifty troopers to the tomb of Humayun, where the King and his family had taken refuge. He called on Bahadur Shah to surrender, and on his giving the required promise, brought the old man, his favourite wife and her young son into Delhi. The General refused to give the King audience, and directed Captain Turnbull to make all necessary arrangements for the safe custody of the prisoners.

The next day, not the 21st as stated by Malleeson, Hodson revisited Humayun's tomb with 100 men, and the two sons of the captured King, Mughal Mirza and Khizar Sultan and his grandson, Abu Bakr Mirza, were induced to surrender. They pleaded for their lives, but Hodson could give no promise, as the General had definitely declined to give any undertaking of the sort. He was convinced that they ought to be hanged, and he had not concealed his view. The party was followed by a large mob of hangers-on, and whether because he anticipated disturbance, or whether the act was premeditated, Hodson stopped the procession outside the Delhi Gate and after explaining to the prisoners the crimes of which they had been guilty, shot them with his own hand, using a revolver he had borrowed from Colonel Becher. His action has been the subject of much discussion. It was condoned by Wilson and approved by nearly

*The Mutiny day by day.*

every officer and man of the Force. It is certain that he merely saved them the agony of waiting for a trial which could have had but one result; as was clear from the fate of two other sons of Bahadur Shah, who were shot in October by order of a military court.

The description of Hodson given in this letter is as perfect as it is brief. The weapons of Bahadur Shah are now in the Museum in the Delhi Fort. They were presented by Sir Roland Wilson shortly before his death.

The column entrusted to Greathed, much to the disgust of Hope Grant, who was senior in service, did not march till the 20th. This force comprised two troops of Horse Artillery under Captains Remington and Blunt, Major Bouchler's battery, 300 men of the 9th Lancers, H. M.'s the King's and the 75th, 450 men of all ranks, the 1st and 4th Punjab Infantry, with 200 Sappers and 400 men drawn from the 1st, 4th and 5th Punjab Cavalry and Hodson's Horse, in all 930 Europeans and 1860 Indian ranks. The selection of the troops was a matter of difficulty, owing to the keen competition of all to get away from Delhi. Wilson was not sorry to have an opportunity of getting rid of some of the more unruly elements of his force, to whom the temptations of the city were too attractive. The Multani Horse had been particularly troublesome and had been restricted to their camp on the Ridge. Their mutiny was in large measure due to disappointment, but actual trouble was avoided by brigading them with the older and more steady Regiments. The Belooch Battalion, who had also been somewhat turbulent, was sent at the same time to Meerut.

The guarantee given by the General through Hodson to Bahadur Shah led to a heated controversy which was not allowed to drop till a year later. History has vindicated Wilson completely, though the public at the time loudly demanded the death of the miserable old man, and even the Governor-General expressed the opinion that no clemency should have been displayed.

## CXXIX.

Palace, Delhi,

*23rd Sept. 1857.*

We are I hope going on smoothly. Order is getting gradually restored. Though the discipline of the Troops has, I am sorry to say, become sadly disorganised. Such a heterogeneous force as I command was certainly never before collected together. Beloochees, Affghans, Seikhs, Patans, Dograhs, all of whom have been bred and taught to consider plunder of an enemy legitimate, and will not be restrained.

The Europeans so badly commanded from the loss of most of their old officers, as to be quite as bad if not worse. I hope, however, it will soon quiet down. Burn is Military Governor of the City, and is exerting himself well. It is odd, is it not? that his Uncle or Grand Uncle should have held the same appointment in this City half a century ago.

The fine fellow Nicholson died to-day at 1 o'clock. What an assistance he would have been to me.

NORR.—The duty of reducing the chaos to order in the city had been entrusted to Major Brind. The whole of the army had no other thought beyond plunder. Houses were ransacked without method at first, with the result that property was wrecked and wasted; but this was soon controlled, partly because a number of men lost their lives at the hands of fanatics who were still concealed about the town in large numbers. Thereafter organised exploration was conducted by various units under the control of prize agents. Treasure and valuables to the amount of nearly fourteen lakhs of rupees were collected, apart from that which was secreted by the finders, an amount which probably exceeded many times that brought to the agents. This exploration was not stopped till the 15th December. On the 24th November an order announced that all the plunder would be regarded as the property of Government, and that in place of their expected share the troops would get six months' batta as a reward. This caused a great outcry, supported by Sir John Lawrence and Colonel H. P. Burn, the Military Governor, as well as Archdale Wilson. In the end, and after long delay, the Government gave way, and the loot, which had been sold at ridiculously low prices, was distributed rateably to the survivors of the force, the grant of batta being allowed to stand.

Nicholson died in the Camp on the Ridge, whither he had been moved from the heat and stench of the city two days after he was wounded. It had been hoped that he might recover, but long before the end it was realised that the hope was vain. He was buried on the morning of the 24th in the new cemetery near Ludlow Castle, amid a great manifestation of sorrow by the whole force.

Colonel Burn reached Delhi from Simla on the 21st to take up the appointment to which he had been designated by the General.

CXXX.

Palace Delhi, Dewan Khass.

*Palace Delhi, 24th Sept. 1857.*

I received your doleful letter of the 20th. this morning. A day or two after that, you will have been rejoicing as much

***The Mutiny day by day.***

as you were depressed. Fancy your old husband being seated on the throne of the Mogul. How Knyvet, Philip, Roland, more particularly Agnes and Jane will rejoice and glory in my success. My greatest pride is in not having discredited the name I bear, and in having brought some additional honour on the dear old County in which I was born. It is proud thing to be a humble follower of the many great men Norfolk has produced. You will have seen Sir J. Laurence's Order on our success. It is very flattering to me. I have done the work I was employed to perform.

We are going on quietly here, getting rid gradually of a lot of Mussalmans, Budmashes, still concealed in the Town. Some 200 of them resisted a party under Major Brind yesterday and were shot. The moveable Column marched this morning.

NOTE.—Small parties of insurgents, for the most part Musalman fanatics, were still hidden in the city, and perpetrated a number of murders. Major Brind ran a large body, numbering over 200, to earth in Darlaganj, as they were attempting to steal out of the city. Having surrounded them and finding clear proof of their guilt in the shape of property belonging to those massacred at the first outbreak of the mutiny, he destroyed the whole body: a drastic measure which had very salutary results.

The despatches and orders relating to the capture of Delhi are collected in an Appendix.

It is difficult not to sympathise with those members of the force who thought that others had attempted to appropriate some of the credit due to their leader. The opinion of the force was summarised by Sir Henry Norman when he wrote in the following month:

"The General whose task it was to take Delhi had no ordinary enterprise in hand. Honour to him for his resolution which persevered to the end, and which led to the success that probably more than anything else will be found to have contributed to the restoration of British authority wherever it has been shaken in India".

Captain Turnbull, who of all others was most qualified to speak, attacked Malleon for his spiteful omission of the name of Archdale Wilson from the list of thirty officers detailed as likely to be remembered by posterity in connection with the siege of Delhi. Fortunately this pettiness counted for nothing, as



Queen Victoria and the British public had a wiser discrimination. More to the point, however, was the protest of the same officer addressed to Mr. Bosworth Smith anent his "Life of Lord Lawrence". This letter demands reproduction as it clearly explains the action, deliberate or intentional, which resulted in an unequal distribution of rewards. He writes :—

"The one figure which stands pre-eminently forward in this narrative of the siege of Delhi is that of Sir John Lawrence. All others sink into insignificance. The terrible anxiety of our generals, receiving constant entreaties (if not more) from Lahore to do something; to take active measures to push on, etc., when it would have been ruinous, if not practically impossible, to do so, the fearful prostration of mind and body by such a strain in a climate reaching sometimes 133° degrees in a headquarters tent, the perpetual knowledge that if nothing were done they might be blamed, and, if anything were done and failed, the blame would be theirs also; more especially as the consequence of any such failure would be the rising of the Punjab; all this does not seem to have been sufficiently taken into account. It was Sir John Lawrence who urged our instant move on Delhi. When we got there we found ourselves checked, surrounded, and outnumbered. He denuded the Punjab of troops, and sent them to us, thus enabling us to hold our own, and thus to save the Punjab, and India. It is hard to see how, with the original responsibility resting on him, he could have done anything less.

"The Siege of Delhi has never been sufficiently estimated in England, and for several reasons. No one can know what really went on there except those who were there. The fall of Delhi took place in September. Sir Colin Campbell had arrived in Calcutta the 13th August. From that moment all attention was riveted on him; and, soon after, on Lucknow. Troops arrived from the Cape by October; the China expedition was directed to India; troops and officers, whose numbers and names had already become well known during the Crimean War, came out; full battalions, one thousand strong, took the place of attenuated regiments of two hundred and fifty; and last, not least, war-correspondents kept the English public

well up in all the minor details of what was then occurring. The natural consequence was, that the recollection of things done at Delhi faded away. The terrible anxieties of the commanders, the gallantry and sufferings of the officers and men, were either passed over, or, if remembered, were soon obliterated by the newspaper descriptions of what was even then going on. One person could not be passed over, and that was Sir John Lawrence. From his constant correspondence with the Government at the Presidency, his work could not be forgotten. The centre of the work above the zone of the Mutiny was the taking of Delhi, so that his name was, in England, more immediately connected with it; and, in the opinion of some, he never used such opportunities as came to his lot afterwards as fully as he might have done in remembering those who were one of the stepping-stones to his advancement."

This was written some time after the event, when Turnbull was a Lieut. Colonel. It is a severe indictment of Lord Lawrence, but it reflected views which were shared by others who knew the task which Wilson had to perform. Lawrence certainly gave the cue, and it became the fashion to stigmatise Archdale Wilson as a weak and vacillating old officer, whom fate had placed in a position for which he was unfitted, and compelled to undertake a task presenting no great difficulty to younger officers who had more spirit. An unfair criticism of a brave and much-tried leader is seldom to be found in history.

There is little reason to doubt that Lawrence had been disappointed in realising the nature of the task he had urged Wilson to undertake. He had informed the Governor-General on the 7th September that in his opinion the first regiment to enter Delhi would be the signal for a general rout. On the 15th he commented on a situation which even Chamberlain admitted to be most difficult by saying: "It may fairly be anticipated that many of the mutineers will have decamped during the night". With these convictions in his mind, he could hardly fail to regard Wilson as slow and inactive. On hearing of the capture of the Magazine he anticipated the "early fall" of the city. This inability to visualise the tremendous struggle involved in continuous street-fighting with a determined and unbeaten foe explains a great deal. Lawrence was becoming very anxious about the Punjab and he longed for immediate and decisive victory at Delhi so earnestly that he became impatient when he found the realisation of his hopes postponed. On the 17th Chamberlain had to protest against this attitude, remarking: "Everybody here is as anxious as you are to effect this great object; so do not suppose we are not inclined to go ahead": a fairly pointed rebuke from a Brigadier to the chief civil authority. On the 21st Lawrence was greatly relieved and remarked: "The more general was the belief of our approaching ruin, the greater will no doubt be the reaction."

## CXXXI.

Palace, Delhi,  
*25th Sept. 1857.*

There is a call for letters and I have not commenced my daily note to you yet. I can only send you a line to say all is going on well. I have not had my pen out of my hands for a moment to spare, since I came in from my ride this morning. I forgot to tell you that I have lost my good Doctor. He went off with the Moveable Column yesterday, to join his new appointment, officiating Supernumerary Surgeon at Agra. I have Martin now to attend me, so am in good hands.

NOTE.—Wilson had been writing his despatches all day, and as usual was completely exhausted with such a literary effort. These despatches are given in full in Appendix I. The complaints made afterwards by General Reid that his recommendations had been neglected were due to the fact that this distinguished officer was unable, owing to his wound, to send in the report of the performance of the troops under his command. Wilson had the highest regard for Reid, but he had been greatly disappointed by the discomfiture of the column directed against Kishanganj, and he may have felt inclined to say as little as possible about its doings.

## CXXXII.

Palace, Delhi,  
*26th Sept. 1857.*

I received your two letters of the 22nd. this morning. All your excitement will by this time, Dearest, have quieted down, and you will, I trust, resume your usual serenity.

I have this day sent an Application to the Gov'r General to be relieved from my command. The special Service for which I was made a Major-General having been accomplished, and to be allowed to return to my legitimate duties as Commandant of Artillery. I have to-day only signed my despatches. My list of killed and wounded was appalling—64 Officers and upwards of 1100 men. Tomorrow we have a Thanksgiving Service for our success, which appears to have had a great effect upon the Country generally.

***The Mutiny day by day.***

**NOTE.**—On this day Wilson wrote a long letter to Sir John Lawrence pointing out the difficulties and danger of concentrating his whole army in the Fort. The problem was far from simple. Wilson had to look after his original base on the Ridge as well as the city, and he feared a recrudescence of trouble. Lawrence contested his arguments, but admitted that he must leave the decision to the military commander. Wilson must have been gratified by the generous remarks made at the close of this letter, wherein Lawrence obviously desired to make amends for past criticisms.

"Lastly, I am desirous to express the Chief Commissioner's concern at the failure of your health. The labors, mental and corporeal, which you have undergone since the assumption of the chief command must have been excessive, and it is only astonishing that you have not succumbed. But you have the consolation and satisfaction, under all your trials, of knowing that, under the blessing of God Almighty, you have been the instrument of vindicating the honour of your country and maintaining its supremacy in Hindoostan."

Queen Victoria endorsed this verdict speedily, and so did Sir Colin Campbell. Had smaller men been content to leave it there, Wilson would have held the place in which his Sovereign had graciously set him, as much entitled to fame and reward as Sir Henry Havelock, among the few who stood out as the champions of their country in the darkest days of the great rebellion.

What irritated Wilson was that in spite of full acknowledgment of his services made in public announcements, private letters from Sir John Lawrence and others tended to create a different impression. In a letter to Dalhousie, written in January 1858, Lawrence stated that "to Nicholson, Alexander Taylor of the Engineers, and Neville Chamberlain, the real merit of our success is due." To Taylor, whose cause had been so warmly espoused by Wilson, he wrote: "I look on it that you and Nicholson, poor fellow, are the real captors of Delhi; particularly after Chamberlain was wounded." It is impossible to avoid the underlying inference, which had an immediate effect, especially on writers in search of the sensational.

**CXXXIII.**

Palace, Delhi.

*27th Sept. 1857.*

We had a very appropriate and excellent Service to-day. It was held in the Dewan Khass, and gave rise to grave reflections. The Worship and glorifying of God and His Son Jesus Christ in the Palace of Delhi.

I commenced this at 8 o'clock, immediately after Church in the hopes I might write you a long letter; it is now half past 4 P.M., and the Dawk is closing. My pen has never left my hand in the interim, and I can hardly hold it to form my letters.

I hope your next will give a better account of the Trench's child, he would be a cruel loss. Is he the only son? I cannot write more, Dearest.

NOTE.—One reason for the brevity of this letter is to be found in a long epistle written that day to his eldest brother, Captain George Knyvet Wilson R.N., the father of the late Admiral of Fleet Sir Arthur Wilson. As a review of the whole operations it is of some interest and is therefore given in full.

Dewan Khass Palace of Delhi,  
27th Sept. 1857.

My dear Knyvet.

Here I am installed in the Palace of the Great Mogul. I know that you, Philip, Roland and Herbert will all glory in my success, and I rather suspect Agnes, Jane and Harriet will be even louder in their joy than the male portion of the Family. The greatest pride I feel on the occasion, is that I have brought some credit on the name I bear, and the dear old County in which I was born. Any man may be proud in having followed humbly in the footsteps of the many great men Norfolk has sent forth. Ellen will, I suspect, have kept you pretty well acquainted with all my proceedings since the 10th May, the day of the outbreak, until a short time before my final success in the capture of the City and Palace of Delhi, before which we have been for nearly four months, in constant fight with the Enemy. This siege is, I suspect, one of the most curious in History. The attacking Force having been for the whole period besieged as well as besiegers. The Rebels numbered from 40,000 to 50,000 men, trained and armed by ourselves, with a Fortress strengthened by our own Engineers, with perfect flanking Defences, Ditch and Glacis. The largest Magazine in the Upper Provinces, with 270 Guns

***The Mutiny day by day.***

of large Calibre. We have never had one fourth their numbers, and from wounds and sickness one third of the Force has been constantly in Hospital. I never doubted my power of getting into the place, after I had got my Siege Train, but I always dreaded the street fighting after I had got in, and so it proved. I could only gain possession of a part of the City on the first day of Assault, and for 6 days we crept on from house to house and street to street, keeping up an incessant and vigorous Bombardment, until the villains could stand it no longer and fairly bolted, leaving the Palace and City nearly deserted for me to take possession of. Had the fellows had any pluck, our small Force must have been annihilated, after getting into the City, which is built of brick houses, each a fortification with few exceptions, narrow winding streets, and large masses of shops and buildings. It is only by God's Providence in putting dismay into the Rebels' hearts, that we have succeeded. The King and his favourite wife are now my prisoners and I expect to have a whole Bevy more of the Royal Family in to-day or to-morrow. I trust my success will have the effect of cutting the neck of the Rebellion, but there is much to be done yet. For myself, the care, anxieties, and fatigue of the last four months of the most inclement season of the year have knocked me up, both mind and body have suffered and must have rest. I have applied to be relieved from my present Command, which now requires a Diplomatist more than a Soldier. It has been hard and fearful work I have had to perform, much more than you good English people will believe for a long time. They will however understand it all in time. Our losses in killed and wounded have been very heavy, particularly in Officers, and as is always the case all the best have been knocked over.

I think I have now fairly earned my *Otium cum Dig.* I only want one step now to enable me to retire. I have sent you these few lines as I know you will all be anxious to hear from me after all I have gone through. Send it round to the

others, and tell Jane I have not forgotten the speech she once made me in Nelson Street, which I then little thought would have come true.

With my kindest love to all, believe me,

Yours affectionally

ARCHDALE.

This letter was addressed purely to the family and not to the world. There is in it no thought of self-defence. and it is a perfectly sincere expression of his views. Wilson knew what his task was, what he had intended, and what he had performed. He realised exactly the degree of credit to which he personally was entitled, and there is no trace of self-glorification in the plain assertion that he had taken Delhi. The authorities in England recognised this promptly, and his rewards came spontaneously from England. They caused much jealousy to those who had played a smaller but more spectacular part, and this jealousy followed Wilson to his retirement. He had, however, a stout supporter in Sir Colin Campbell, whose word at the time carried more weight than any other.

CXXXIV.

THE Palace, Delhi.

*28th Sept. 1857.*

I do not pick up strength at all, getting daily weaker and good for nothing. I have written to Gowan to say how unfit I am to continue here and recommending that General Penny should be sent to relieve me, and that I should take his place at Meerut. Penny, from what he wrote me yesterday, would, I think, like this arrangement. He feels the awkward position in which he is now placed, with a Junior Officer commanding a Force within his Division, quite independent of his control, and this change would put us both in our relative positions. I hope to hear in two or three days, if this can be done. If not, I must take a month and go over to Meerut for rest. In either case, Darling, I hope you will be able to join me. Your nursing and society will set me up quicker than anything. Ask Mr. Trench if he thinks he will be able to send you over safe, unless this is certain you will not move, but I will try and get

***The Mutiny day by day.***

up to you. We brought in three of the King's sons yesterday, wretched looking Mussaulchees, and some of their women. I expect more to-day.

Poor Greathed died of Cholera, the idea of his having been poisoned must have originated from some of your news makers at Mussorrie. All very quiet about here at present. I wish the Civilians would establish their own power again, but this will be a work of time. I fear the English Mail has been stopped somewhere about Moultaun.

**NOTE.**—The three sons of Bahadur Shah were Jiwan Bakht, Bakhtawar Shah and Mendu, brought in from Humayun's Tomb by Brigadier Showers, who commanded a small column sent out in that direction and located for the time at the Qutb. Sir John Lawrence recommended their immediate trial and punishment. On this capture Showers proceeded towards Faridabad, with 200 of the 52nd, 200 Guides, 400 of the 4th Sikhs, 300 Cavalry of the Guides and Hodson's Horse and a horse artillery battery. His instructions were to punish the rebellious Gujars of Tughlaqabad, Gurgaon and Rewari and generally to settle the Gurgaon District cooperating with General Van Cortlandt, who was similarly engaged in Rohtak and Hissar with his irregular troops. The Nawab of Jajhar was captured on the 17th October and executed after trial on the 23rd December.

CXXXV.

Palace, Delhi,  
*29th Sept. 1857.*

I am feeling a little clearer and better to-day, but I am so sick of the work I have got to do. Unruly and undisciplined Punjabee troops to manage who consider it their right to loot and will not be restrained and who, if very strong measures were used, would most probably mutiny. No assistance hardly given by their own Officers in restraining them and the constant wearying Political and Diplomatic questions to decide in which no two persons agree and for which I can get no instruction from any one. In the midst of our success we are still isolated from any sort of Government, left to our own devices, and expected with a tired, worn out and shattered Army to go here, there and everywhere; in fact they want me to retake the whole of India I believe,



The only news I have for you is that the Column under Greathed found the Malaghur Insurgents intrenched at Bolundshuhur. He attacked them and after a hard fight beat them out of the place. Our loss was 50 killed and wounded, the enemy's 400. The Fort of Malaghur is said to be evacuated and I hope they have possession and destroyed it before this. This shows however that the fight is not yet taken out of the Rebels, and with his small Column he will, I fear, have hard work to clear the Doab. Government are expecting more from their weak sickly troops than they are able to perform.

I have now the King, three of his sons, and no end of his wives, prisoners within the Palace. What is to be done with them? Can't get orders.

**NOTE.**—Bakhtawar Shah and Mirza Mendu, the sons of Bahadur Shah were tried in October by a military court and sentenced to death. They were shot on the 13th October. Bahadur Shah was tried in the Dewan-i-Khas on the 27th January 1858 by a commission of field officers, with Colonel Dawes of the Bengal Artillery as president. After a trial lasting many days he was found guilty of rebellion, treason and murder, and deported to Rangoon as a state prisoner with Zinat Mahal Begam, her son Jiwan Bakht, and another wife. He died there on the 7th November 1862, at the age of 89.

The complaint against the unreasonable attitude of the authorities was directed at both Agra and Lahore. Wilson was in no position to restore order in the Eastern Punjab and the Doab. He had a difficult task enough in Delhi, where the search for hidden treasure had become a mania, most of the officers being badly infected. He had sent away a generously large force under Greathed, but it was all too weak for the task demanded of it, and the success it achieved was remarkable.

On the 26th Greathed occupied and destroyed the Gujar town of Dadri, and the next day reached Sikandarabad. Here he found himself on the heels of the enemy and on the 28th he advanced towards Malagarh, the stronghold of the notorious Walidad Khan. Observing that the rebel patrols fell back on Bulandshahr, he left Malagarh alone and proceeded to attack the position taken up by the enemy, consisting of the Jhansi mutineers, in front of the town. He defeated them soundly, taking three guns and a quantity of stores, seized the abandoned fort of Malagarh and blew it up. During the last operation by sad mischance the gallant Home was killed.

Greaded then proceeded to Khurja, Aligarh, Bijaigarh and Agra which he reached on the 10th October, there defeating with signal success a large force of rebels who were threatening Agra from the direction of

Dholpur. Shortly afterwards Hope Grant took command of the column, and marched down the Doab to Cawnpore, which was reached on the 26th October.

The political task imposed on Wilson was considerable. He had not only to administer Delhi, but to take over the properties of the state prisoners, and also deal with rebel chiefs, such as the Raja of Ballabgarh, the Nawaba of Dadri and Jajhar, as well as smaller notables at Pataudi, Farrukhnagar and Rewari.

Lawrence was theoretically right in impressing on the General the urgent necessity of following up the rebels: but he did not realise the state of the army, and he only caused irritation when he suggested among other measures a vigorous pursuit as far as the Chambal, the clearing of the Doab up to Mainpuri and a rapid advance toward Rohilkhand and Oudh. The Governor-General himself protested. "It seems to His Lordship in Council probable that for the recovery of the Doab, and the securing of the line of communication, we shall have to depend mainly upon the European Force which may be sent up from the Presidency. It is greatly to be feared that the Army of Delhi, after the labours of the siege shall be over and the immediate excitement shall have passed away, will, like all armies under like circumstances, suffer severely from sickness; and the Governor-General in Council is prepared to find that the Army of Delhi, when its own chief work has been accomplished, will be equal to little more than securing Meerut and the country about Delhi." These reasonable and sympathetic remarks betray the sound military sense of Sir Colin Campbell. The army as a matter of fact did much more than he anticipated, and added greatly to its glory within a few weeks.

#### CXXXVI.

Palace, Delhi,  
*30th Sept. 1857.*

I was in luck to-day having last night received your dear letters, and this morning another, all of the 26th. I am very glad to hear so much honour is being done to my gallant Force. For myself I would much rather be left in obscurity. You know how much I dread and hate all such displays, and it is not the least of my troubles that I shall have to undergo lots of speecifying and suchlike nonsense.

The King has my promise of his life being spared, and cannot therefore, be hanged, not so his sons, several of whom I regret to say have escaped me. Two of them, who were in

custody of Brigadier Showers' Column, managed in the confusion to escape and have not since been heard of. It was bad management. Two that I have here will be immediately tried by a military Commission.

I am anxiously waiting an answer from General Gowan. If he can relieve me I hope to get it before night.

I have sold old Marmaduke, he did not stand fire, or be steady enough for the work I had here, and as I could not keep him in exercise, he was becoming unruly.

I feel a little better, but cannot get rid of the weight in my head.

NOTE.—The apprehension of the remaining members of the Royal family was a duty especially entailed on Brigadier Showers, and their escape was deplored by Lawrence, who from the first had desired to execute summary vengeance on these rebel pensioners. He objected strenuously to the proposal ultimately adopted, to spare Jiwan Bakht, and he was particularly annoyed at the escape of Mirza Muhammad Quresh, the eldest son of the King, and his brother Mirza Abdullah. They had been caught near the Qutb by the cavalry, and it seems probable that the troopers connived at their flight.

Wilson had had his first experience of speech-making in the Dewan-i-Khas, at dinner in Mess on the day of the capture of the Fort. He proposed the Queen's health amid wild enthusiasm and, though he felt at home among his admiring comrades, he was far less happy on other occasions, and he dreaded anything in the shape of the public receptions in London which he knew well enough that he would have to face.

CXXXVII.

Palace, Delhi,  
*1st Oct. 1857.*

I have put off writing to the last moment in the hope of receiving a communication from General Gowan authorising my going away on leave, if I cannot be relieved from this command. If I do not hear either to-morrow or next day I shall give myself the leave. Both Martin and Tritton urge me to go as necessary to recover my strength, and instead of getting better I am getting weaker and more unfit every day. I cannot sleep at night, and my whole frame is disorganised,

*The Mutiny day by day.*

I have no particular news to send you. Nothing has been heard yet from Lucknow. I am getting very anxious as to what may have happened there. God grant they had been successful, any failure there would put us in as bad a fix as ever.

I received yours of the 28th this morning. I cannot join in all the exultation you are carrying on at Landour and Mussourie; there is so much yet to do and the result so doubtful, that I think they should be deferred for the present.

**NOTE.**—The last remark in this letter is highly characteristic of the man. His caution and his broad vision had often irritated others who were unable to appreciate the larger situation. As a matter of fact, on this occasion Wilson was probably wrong. The rejoicings over the fall of Delhi, whether due to a short-sighted view of the general position or not, served undoubtedly to raise the British moral and to lower that of the enemy. In the South African War the relief of Mafeking, though a minor episode of little military importance, was celebrated in every Station in India with enthusiasm, and the effect was immediate on a population which had been greatly impressed by a succession of disasters. The fall of Delhi had an incalculable result on Indian opinion, and was in fact the deciding factor in the course of the Mutiny. Wilson did not realise the full effect of his success and the resultant relief of pressure in other quarters. Moreover he had a genuine horror of posing as a hero, and he dreaded the prospect of receptions at Mussoorie in the immediate future. He knew well enough what was in store for him, and his retiring spirit was dismayed.

## CXXXVIII.

Palace, Delhi,

*2nd Oct. 5 p.m.*

I have just received a message from Lahore to say General Penny is to relieve me. I shall take two months' medical leave but only avail myself of as much as is necessary. I will let you know to-morrow if I am to go to the Hills or Meerut. I suspect it will be the former, either way it will not be long before I see you again, Dearest.

**NOTE.**—Leave being assured, a sense of duty at once attacked him. He knew that there was much yet to be done, and he realised that the lack of capable commanders was great. He was back at work before Christmas, and barely a month later he again took the field.

## CXXXIX.

Palace, Delhi,

*3rd Oct. 1857 11 a.m.*

Just received your dear letters of the 30th. Mine of yesterday will have told you that I am to be relieved from this Command by General Penny. I start from this tomorrow morning on two months' Medical Certificate to Meerut and Mussourie and as the climate of the Hills will most likely do me more good in this month than that of Meerut, I shall only remain there sufficient time to lay my Dawk, and then run up to you, to be nursed and made much of. If I am sufficiently well by the beginning of November we will come down together to Meerut, where I hope to be permitted to resume my proper place as Brigadier Commandant of Artillery. The special duty for which I was appointed Major General has been performed and I shall gladly resign my rank. You must look forward, Darling, to find me very exacting when you get hold of me again. It is a happiness I have hardly dared hope for these last four months ever to see you again, and I shall not be able to realise it fully until I really have you in my arms again. You will find me, I fear, much changed, but your kind love and nursing will soon put me right again.

I have written to Dr. Tritton your wishes about the clothing received for the soldiers from Landour and Mussourie. I fear Tritton as well as all of us had too much to do to pay that attention to your contributions you would have wished, but this I can tell you, that all or nearly all were distributed where they were most required, viz. to the sick and wounded in the different Hospitals. I had several packages of tobacco from you a few days ago, this I have distributed myself to different Regiments, not forgetting the Artillery.

Good news from Havelock's Column of the 22nd, received to-day. They had attacked and beaten the rebels with heavy loss taking 5 Guns, with very little loss themselves. This promises well.

*The Mutiny day by day.*

And now, Darling, I hope this letter will set your dear heart at ease and that you will immediately set to work and put on your best looks to welcome your old worn out husband. God for ever bless you, Darling, for the constant support and comfort you have given me throughout all my arduous work.

**NOTE.**—The order dated 30th September 1857 ran as follows:—"The Major General Commanding in the Upper Provinces is pleased to appoint Major General N. Penny, C.B., to the command of the field force at Delhi, in conjunction with that of the Meerut Division, in the room of Major General A. Wilson, proceeded on leave, on medical certificate."

Havelock had crossed the Ganges at Cawnpore on the 19th September, and on the 21st had fought a very successful action at Mangalwar, thence pushing on to Unao and Bhasharatganj. On the 22nd he reached Banni, and the following day he drove the enemy from the Alambagh. The Residency was reached on the 26th, and thereafter Havelock and Outram remained beleaguered till relieved by Sir Colin Campbell on the 16th November.

CXL.

Meerut,  
4th Oct. 1957.

I arrived about noon rather knocked up from trip. I find the weather very warm yet and the sooner I can get up to the Hills the better. I hope to be able to start on the 7th, but will let you know to-morrow.

**NOTE.**—If any further letter was sent, it has disappeared. Wilson pushed on to Mussoorie and remained there a few weeks. He then returned with his wife to Meerut, and was in command of that station till summoned by Sir Colin Campbell to join the main army as Major-General Commanding the Artillery Division. He never had to resign his rank, for he was immediately and properly given special promotion. As a Major-General he became eligible for the command of a Division, but he refused both Benares and Dinapore, having made up his mind to retire at the earliest opportunity. He considered himself too old for active service and had no mind to follow the example of those aged Generals, whose advanced years had proved so serious a danger to the Empire when the need for prompt and strenuous action first arose.

*Gazette Notification No. 469 of 1858.*

The Honorable the President in Council is pleased to direct that the following military letter from the Honorable the Court of Directors to the Government of India, No. 17,

dated 26th January 1858, announcing the grant of special pensions to Major-General Sir A. Wilson, Baronet and K.C.B., and to Lady Neill and Mrs. Nicholson, be published in General Orders:

*Military Department, No. 17 of 1858.*

OUR GOVERNOR GENERAL OF INDIA IN COUNCIL.

1. With reference to our Military despatch, No. 250 of 1857, dated 9th December, we have to apprise you that, as a special mark of the sense which we entertain of the skill, sound judgment, steady resolution and gallantry of Major-General Sir Archdale Wilson, Baronet, K.C.B., in the operations which resulted in the storm and capture of Delhi, by which, under the blessing of Divine Providence, the reputation of the British Arms and Nation has been nobly sustained, we have resolved to grant him a special pension of £ 1000 a year.

We have also resolved, in recognition of the brilliant and eminent services of the late Brigadier Generals Neill and Nicholson, to grant to Lady Neill, the widow of the former officer, a special pension of £ 500 a year, and one of similar amount to Mrs. Nicholson, the mother of the latter officer, in addition to the allowances to which they are respectively entitled under regulations making special pecuniary grants to the families of officers killed in action.

We are, etc.,

ROSS D. MANGLES,

*And Ten other Directors.*

LONDON,

26th January 1858.

The "London Gazette" of the 17th November 1857 contained the following notifications :—

***The Martiny day by day.***

*War Office, November 11th 1857.*

The Queen has been graciously pleased to give orders for the appointment of Sir John Laird Mair Lawrence, K.C.B., Chief Commissioner and Agent to the Governor General of India for the affairs of the Punjab, to be an Ordinary Member of the Civil Division of the first class, or Knights Grand Cross of the Most Honorable Order of the Bath; and of Major General Henry Havelock, C.B., to be an Ordinary Member of the Military Division of the second class, or Knights Commanders of the said Most Honorable Order.

Her Majesty has also been graciously pleased to make and ordain a special statute of the said Most Honorable Order, for appointing the following officers to be Extra Members of the Military Division of the third class, or Companions of the said Order : *viz.*

Colonel Archdale Wilson, of the Bengal artillery; Colonel Henry Charles Van Cortlandt, commanding a corps of irregular levies in the East Indies; and Lieutenant Colonel Neville Bowles Chamberlain, of the 16th regiment of Bengal native infantry.

*War Office, November 14th, 1857.*

The Queen has been graciously pleased to give further orders for the appointment of Colonel Archdale Wilson, C. B., of the Bengal Artillery, to be an Ordinary Member of the Military Division of the second class, or Knights Commanders of the Most Honorable Order of the Bath.

*Memorandum.*

Colonel James George Neill, of the Madras fusiliers, and Lieutenant Colonel John Nicholson, of the 27th regiment of Bengal native infantry would have been recommended for the dignity of Knight Commander of the Order of the Bath had they survived.



## ***The Mutiny day by day.***

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In order to complete the account of the rewards given to Wilson, the following extracts are added:—

*Whitehall, November 26th 1857.*

The Queen has been pleased to direct Letters Patent to be passed under the Great Seal, granting the dignity of a Baronet of the United Kingdom of Great Britain and Ireland unto Major General Archdale Wilson, of Delhi, Knight Commander of the Most Honorable Order of the Bath, Lieutenant Colonel of the Bengal artillery, and to the heirs male of his body, lawfully begotten.

*Horse Guards, S. W., 30th November 1857.*

In consideration of the distinguished services performed by Colonel Sir Archdale Wilson, BART. and K.C.B., of the Bengal Artillery, at the siege of Delhi, the Queen has been graciously pleased to command that he be promoted to the rank of Major-General in the Army, in conformity with the 10th Clause of the Royal Warrant of the 6th October 1854, and that his commission shall bear date the 14th September 1857, the day on which the Troops under his command stormed and carried the ramparts of the City of Delhi.

By Order of His Royal Highness the General Commanding-in-Chief,

G. A. WETHERALL,  
*Adjutant-General.*

*War Office, Pall Mall, 1st December 1857.*

### **BREVET.**

Colonel Sir Archdale Wilson, BART. and K.C.B., of the Bengal Artillery, to be Major General in the Army, dated 14th September 1857.

No. 1634 of 1858.—The Honorable the President of the Council of the Right Honorable the Governor-General of India in Council is pleased to make the following promotion :

***The Mutiny day by day.****Regiment of Artillery.*

Lieutenant Colonel (unattached) and Major General Sir Archdale Wilson, *Bart.* and K.C.B., to be Colonel, from the 14th October 1858, *vice* Major General J. J. Farrington, deceased.

## APPENDIX I

GENERAL ORDERS, NOTIFICATIONS, AND DESPATCHES  
RELATING TO THE

## SIEGE AND CAPTURE OF DELHI.

No. 8.

FROM

BRIGADIER A. WILSON,

*Comdg. Field Force,*

To

THE ADJUTANT GENERAL OF THE ARMY,

*Headquarters.**Camp Ghazeeoodeen Nuggur,**The 31st May 1857.*

Sir,

I have the honour to report for the information of Major-General Sir H. Barnard, K.C.B., Commanding the Umballa Force, that, as reported in my brief Despatch of last night, my Advance Picquets were driven in at about 4 o'clock yesterday afternoon, and that I was attacked by a large Force of the Mutineers, accompanied by heavy Guns from Delhi.

I immediately sent off a Company of H. M.'s. 60th Royal Rifles with another in support to hold the Iron Bridge, which is the key of my position, and I detached the four guns of Major Tombs' Troop, supported by a Squadron of Carabineers to the right, along the Bank of the Hindun River.

The Insurgents opened upon these advanced parties with heavy Guns. I ordered two more Companies of the 60th to support their advance and brought up four Guns of Major Scott's Battery, the Sappers, and a Troop of Carabineers to their support, leaving two Guns and Troop of Carabineers to protect the Camp.

The first few rounds from the Insurgents' Guns were admirably aimed, plunging thro' our Camp; but they were ably replied to by our two 18 Pounders in position under Lieutenant Light and Major Tombs' Troop, most admirably led by Lieutenant-Colonel M. Mackenzie, who raking them in flank with his 6 Pounders, first made their fire unsteady, and in a short time silenced these heavy Guns.

On remarking the unsteadiness of their fire, I ordered Lieutenant-Colonel Jones to advance his Rifles and attack. This was done in a most spirited manner. They drove the Enemy from the Guns, but in the act of taking possession of two heavy pieces on the causeway close to the Toll House, I regret to say that Captain Andrews and four of his men were blown up by the explosion of an Ammunition Wagon fired by one of the Mutineers.

The Insurgents were now in full retreat, leaving in our hands Ordnance Ammunition and Stores, as detailed in the accompanying Statement. They were followed for a considerable distance on the Delhi road by Lieutenant-Colonel Custance, Commanding the Carabineers with the Force.

Where all behaved so well, and showed such gallant conduct, it is almost invidious to particularise; but I wish to bring to Major General Sir H. Barnard's notice, and through him to the Commander of the Forces, Lieutenant Colonel Mackenzie, 1st Brigade Horse Artillery, who so ably led; Major Tombs, who so gallantly fought the 2nd Troop of that Brigade (the latter had his horse shot under him); Lieutenant-Colonel Custance, Commanding the Carabineers; Lieutenant-Colonel Jones, who so gallantly led the 60th Rifles; and Major Scott, who ably supported that Regiment.

***The Mutiny day by day.***

I beg to enclose the Reports I have received from Officers Commanding Detachments, with a Return of Killed and Wounded, and of the captured Ordnance and Ammunition.

Mr. Greathed, the Commissioner, attended on me during the whole of the action.

From this gentleman, and from my own personal Staff, Captain Johnson, Staff Officer of the Force; Captain O. Hamilton, Officiating Deputy Assistant Quarter Master General; Captain Russell, of the 54th and Lieutenant Barchard, of the 20th Native Infantry, my Orderly Officers; Lieutenant Waterfield of the Commissariat Department—I received every assistance.

The casualties may not be considered great under the advantages we have gained, but with my small Force I cannot afford to lose men. I have applied to Major-General Hewitt, Commanding Meerut Division, for a reinforcement, as I consider my present Force much too small for the position I am placed in, liable to constant attack from Delhi. Parties of horse have been seen from that quarter, reconnoitering my position all the morning, and it is very harassing to the men to be kept so constantly on the alert.

I have etc,  
A. WILSON, *Brigdr.*  
*Commanding Field Force.*

No. 12.

FROM

BRIGADIER A. WILSON,

*Comdg. Field Force,*

To

THE ADJUTANT GENERAL OF THE ARMY,

*Headquarters,*

*Camp Ghazeeoodeen Nuggur,*

*The 1st June 1857.*

Sir

In continuation of my demi-official Express of last night's date I have the honor to report for the information of Major-General Sir H. Barnard, K.C.B., and through him, of the

Commander of the Forces, that the Insurgents attacked me again yesterday afternoon, at about 1 o'clock, in force.

They took up a position extending fully a mile on the high ridge on the opposed side of the Hindun, about a mile from my advanced Picquet in front of the Bridge, and commenced a fire with their Guns from this long distance.

The Guns of the Horse Artillery, supported by a Squadron of Carabineers, immediately moved forward to reply to their fire, and the two 18-pounders under Lieutenant Light moved to the bank of the River for the same purpose. The Rifles, leaving one Company in Camp, moved forward to the support of the Picquet, at the Bridge, supported by two Guns of Major Scott's Battery and a Troop of Carabineers.

Perceiving that the Horse Artillery was exposed to a very heavy fire, I advanced two more Guns of Major Scott's Battery under Lieutenant Davidson to support them.

For nearly two hours the action was one of Artillery chiefly.

The Rifles clearing the Village on the left of the Toll Bar, and the fire of the Enemy's Guns slackening, I ordered a general advance, the Insurgents retiring continuing their fire, until we drove them from their position and crowned the Ridge from which we could see them in full Retreat to Delhi.

My men were so knocked up by the heat of the sun, by which many officers and men were struck down, that I could not follow them further, as I wished; I therefore withdrew the Force into Camp, after having first burnt a Village on our right flank, from which the Insurgents had given us much annoyance.

All the Force performed their duty well and to my satisfaction, and in addition to those Officers whom I brought to notice in my Despatch of yesterday, detailing the action of the 30th, I wish to report favourably of Lieutenant Elliot of the Artillery, who supported the Rifles with two Guns of Major Scott's Battery, in the most steady and determined manner.

***The Mutiny day by day.***

Lieutenant Light also did admirable service with his 18-Pounders. The Sappers and Miners, under Lieutenant Maunsell, whom I brought up in support of Lieutenant Elliot's Guns performed most efficient service.

I have to regret the loss of Lieutenant Perkins, of the Horse Artillery, an invaluable officer, and a great loss to me.

I beg to enclose Reports from the Commanding Officers and a return of killed and wounded.

I regret to say that the Insurgents were enabled to carry off all their Guns, which appeared to me to consist of two heavy Pieces on the Delhi road and five light Guns, most probably the remains of Captain De Tessier's Battery. One of their Ammunition Waggons only was destroyed.

I have etc.,

A. WILSON, *Brigdr.*

*Commanding Field Force.*

FROM

MAJOR-GENERAL SIR H. BARNARD K.C.B.,

*Commanding Field Force.*

To

THE ADJUTANT-GENERAL OF THE ARMY,

*Camp Delhi Cantonment, 8th June 1857.*

Sir,

The Forces under my command marched from Alipore at 1 A.M. this morning, and on reaching Badulee-ke-Serai, found the Enemy strongly posted in an entrenched position, which I have the satisfaction to inform you was carried after an engagement of about three-quarters of an hour, and proceeded to take up our present position, which we found to be over disputed ground the whole way, and finally in a well-defended line of defence from the Signal Tower to Hindoo Rao's house,

Our troops behaved with the greatest gallantry and persevering endurance, and after facing a very determined resistance, drove the Enemy within the walls of Delhi: all this was accomplished by 9 o'clock in the morning. Our loss is comparatively trifling, only one Officer being killed; but I regret to say that Officer is Colonel Chester, Adjutant General of the Army, who was esteemed by all for every qualification that can adorn the Soldier. I have not been able to ascertain the particulars of our loss, or our capture of Guns, but I fear I cannot estimate the former under 40 or 50 killed; the number of Guns taken to be about 16 or 18. I do not in this hurried Despatch attempt to recommend any one, but I cannot pass over the assistance I received from Brigadier Wilson, whose cool judgement entitles him to an equal share of any merit that may be given to the Officer in Command. From the Brigadier and the Staff of the Army attached to me from the Divisional Staff, I received every support and from my personal Staff, Captain Barnard and Lieutenant Turnbull, the most daring devotion.

The conduct of the Goorkha Battalion, the Sappers and other Native Troops employed, was most praiseworthy; they vied with their European Comrades in forward daring. The Troops of the Native Contingents did equally good service, including those of the Jheend Rajah; and I cannot close this without special mention of many Gentlemen attached to the Army in Civil capacities, who not only accompanied us into the Field, but did every service the extended nature of our position rendered prominent, in keeping up mutual communications.

I hope to send you a fuller detail to-morrow. Our Siege Train is up, and I hope to open on the Town without a moment's delay.

P. S.—I find the captured Guns amount to 26, and I desire to add to this, in justice to myself, special notice of the assistance I received from Colonel Congreve, C.B., Acting

***The Mutiny day by day.***

Adjutant General of Her Majesty Forces in India; Colonel Becher, Quarter Master General of the Army, and Colonel the Honourable R. Curzon, Military Secretary to the late Commander-in-Chief, who never left me; Captain Norman, Assistant Adjutant General to the Army, and on whom the important duties of Adjutant General devolved on the death of Colonel Chester, and Colonel Young, Judge Advocate General of the Army, who accompanied me during the whole of the  
 • action.

FROM

MAJOR-GENERAL SIR H. BARNARD, K.C.B.,  
*Commanding Field Force,*

To

THE ADJUTANT GENERAL OF THE ARMY,  
*Camp before Delhi, 12th June 1857.*

Sir

With reference to my hurried Despatch of the 8th instant, I have now the honor, for the information of the General Commanding the Forces, to submit a more detailed account of the action of Badulee-ke-Serai, and seizure of the position on the Ridge above the Cantonments of Delhi necessary to hold, with regard to ultimate operations against that City.

Having been joined by the Force under Brigadier Wilson, I broke up the Camp at Aleepore without delay, and on ascertaining that the Enemy had made preparations to oppose our advance, and occupied a fortified position at Badulee-ke-Serai,

6 Guns 3rd Troop, 3rd Bde.  
 H. A.

4 Do. 2nd Troop, 1st Bde.  
 H. A.

3 Squadrons, 9th Lancers.

I made the following disposition of the Forces:—Brigadier Grant, C.B. with the Force as per margin was to gain the opposite side of the Canal and recross it below, and in rear of the Enemy's position, so soon as he heard the action commence, with a view of taking the Enemy in flank. The 1st



Brigade under Brigadier Showers was to act on the right side of the Main Trunk Road, along which the column was to advance and the 2nd Brigade, under Brigadier Graves, was to take the left; the heavy guns were to remain in position on the road, the rest of the Artillery to act on either side. As soon as our Advance Picquet met the Enemy, these Brigades deployed, leaving the main road clear; the Enemy soon opened a very heavy fire upon us, and finding that our Light Field Pieces did not silence their Battery, and that we were losing men fast, I called upon the 75th Regiment to make a dashing charge, and take the place at the point of the Bayonet. This service was done with the most heroic gallantry; and to Lieutenant-Colonel Herbert, and every Officer, Non-Commissioned Officer, and Man of the 75th Regiment, my thanks are most especially due. The 1st Europeans supported the attack, and on the 2nd Brigade coming up and threatening their right, and Brigadier Grant showing the head of his Column and Guns on their left rear, the Enemy abandoned the position entirely, leaving his Guns on the ground. The action lasted nearly one hour, and I regret to say cost many valuable lives.

Although the men were much exhausted, I determined to push on, under the impression that, if I halted, a similar difficulty might be opposed to me the following day in gaining the requisite position, and on the road separating, it became desirable to act in two columns, sending along the Main Trunk Road, and taking the other to the left through the Cantonments.

To Brigadier Wilson supported by Brigadier Showers' Brigade, I confided the conduct of this Column, which had to fight its way through gardens with high walls and other obstacles the whole way, and taking the 2nd Brigade with Brigadier Graves with myself, I proceeded to the left. I soon found that the Enemy had posted himself strongly on the Ridge over the Cantonment with guns in position, and under the range of which we soon found ourselves; upon which I determined on a rapid flank movement to the left, in the hope of

***The Mutiny day by day.***

gaining the ridge under cover of the Cantonments, and taking the position in flank. This was happily successful; the Enemy got their Guns hastily into position to meet me, and Brigadier Graves' Brigade, consisting of the 60th Rifles, under Lieutenant-Colonel Jones, supported by the 2nd Europeans under Captain Boyd, advanced gallantly, supported by Captain Money's Troop of Horse Artillery, carried the position; and the Enemy finding himself taken in flank and rear, abandoned his Guns, and we swept the whole Ridge from the Flagstaff to Hindoo Rao's house, where I had the satisfaction of meeting Brigadier Wilson; and the object of the day having been thus effected, the Force was at once placed in position before Delhi.

I have already mentioned to the Commander-in-Chief the names of Officers to whom I am indebted, and whom I desire in justice to call to his notice, and to whose names I beg to add those of Major Ewart, Deputy Assistant Adjutant General, and Captain Maisey, Deputy Judge Advocate General and beg to stateth at I fully concur in the merit of those recommended by my Brigadiers.

FROM

MAJOR-GENERAL SIR H. BARNARD, K.C.B.,  
*Commanding Field Force,*

To

THE ADJUTANT GENERAL OF THE ARMY,  
*Camp Delhi Cantonment, 12th June 1857.*

Sir

I have the honour to report, for the information of General Reed, Commanding the Forces, that the Enemy attacked the position occupied by the Troops under my Command this morning in force. The Troops acted throughout with gallantry and coolness, and the affair ended in the total repulse of the Enemy, who have retreated to the City. At about  $\frac{1}{4}$  to

5 A.M., the attack first began. On my ascertaining that both flanks were being attacked, the usual supports were not only sent up to the position on the heights, but the whole of the Troops under my Command were speedily under arms, and marched up to reinforce the Picquets and to drive back the Enemy. This was first accomplished on the left, the Enemy falling back under the fire of the Troops, and after being beaten back from the right, they came on again for a second attack under cover of the thickly-wooded gardens near the Subzee Mundy. The 1st Bengal European Fusiliers were sent against them under the Command of Major Jacob, and succeeded most gallantly in not only driving the enemy, back but pursued them, skirmishing all through the thickly-wooded gardens of the Subzee Mundy. It was about 7½ A.M., when the Troops began to be re-called, and the Assembly first sounded for the skirmishers.

In comparison with the strength of the attack, our loss was small, and I trust to be able to send in, without delay, the Official Return of the Killed and Wounded. I have heard as yet of only one casualty among the Officers—Captain Knox, 75th Regiment, who was killed when reinforcing the Picquet at the Flag Staff Tower, and while driving back the Enemy. The loss on the other side, to the Enemy, must have been considerable, and although difficult to estimate, could not have been less than two hundred and fifty.

FROM

MAJOR-GENERAL, SIR H. PARNARD, K.C.B.,  
*Commanding Field Force,*

TO

THE ADJUTANT GENERAL OF THE ARMY,  
*Head Quarters, Camp*  
*Camp Delhi Cantonment, 14th June 1857.*

Sir

I have the honour to report, for the information of the Commander-in-Chief, that the Enemy attacked our position

***The Mutiny day by day.***

about 5 P.M., making first an attack on the left and then advancing in force on the right. After about an hour both attacks had been repulsed, and the Troops returned to the Camp.

FROM

MAJOR-GENERAL SIR H. BARNARD, K.C.B.,  
*Commanding Field Force.*

TO

THE ADJUTANT GENERAL OF THE ARMY,  
*Head Quarters Camp.*  
*Camp Delhi Cantonment, 16th June 1857.*

Sir,

While enclosing, for the information of the Commander,  
the Reports \* of the late attack  
\*Not printed. made by the Enemy on the

Force under my Command, I would wish to bring to notice the assistance I have received in every way from the services of Lieutenant Hodson, 1st Bengal European Fusiliers. Since the arrival of his Regiment at Umballa up to the present date, his untiring energy and perpetual anxiety to assist me in any way his services might be found useful, have distinguished him throughout, and are now my reasons for bringing this Officer thus specially to the notice of the Commander-in-Chief.

FROM

MAJOR-GENERAL SIR H. BARNARD, K.C.B.,  
*Commanding Field Force,*

TO

THE ADJUTANT GENERAL OF THE ARMY,  
*Camp before Delhi, 18th June 1857.*

Sir,

I have the honour to report, for the information of the Commander-in-Chief, that on ascertaining yesterday that the

## ***The Mutiny day by day.***

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Enemy was erecting a Battery and taking up a position about the village of Puharipoor, from which it was considered imperative to dislodge them, I ordered a small Force to proceed to the spot, in two Columns, to march at 4½ p.m.; the first Column, under Major Tombs, of the Horse Artillery, and the second, under Major Reid, Commanding the Sirmoor Battalion, and form a junction at Trevellyan and Kissengunge, drive the Enemy out of his position, and destroy the Battery. This service was performed with the usual gallantry and daring of our Troops, which cannot be better brought to your notice than by forwarding the reports of the Officers in Command. I fully concur in the merit of the Officers recommended to your notice. I beg also to make most special mention of Major Tombs and Major Reid—the former conspicuous for his usual cool courage and judgment (and who, I regret to say was slightly wounded and had two horses shot under him), and the latter for that forward gallantly and knowledge of his work, that in both these Officers inspire the confidence of their men and lead our Troops to such brilliant success.

FROM

MAJOR H. TOMBS,  
*Horse Artillery, Comdg. the Column,*

TO

MAJOR R. S. EWART,  
*Depy. Asst. Adj. Genl.,*  
*Camp before Delhi, 18th June 1857.*

Sir,

I have the honor to report, for the information of Major-General Sir	
H. Bernard, K. C. B., Commanding the Field Force, that the Troops as per	
4 Guns 2nd Tr. 1 Bde. H. A.	margin, with the Command of which
2 Cos. H.M.'s 60th Rifles.	he did me the honor to entrust me,
4 Cos 1st European Fusiliers.	left Camp at 4-30 p.m., and moved
20 Sappers and Miners.	through the Subzee Mundy until they
20 Cavy. of the Guide Corps.	arrived at the road leading across the
	Canal in the direction of the Eadgah.

The Columns moved up this road, and had not advanced more than a couple of hundred yards, when the Enemy opened fire upon it from some walled gardens on the left of the road. Leaving parties of Riflemen under these

***The Mutiny day by day.***

walls, with orders to keep down the fire of the Enemy, I advanced with the main body, until we arrived at the Suburb of Puharpoor. Here I detached the four Horse Artillery Guns, with one Company Fusiliers and the Guide Cavalry in support, with orders to take the road leading round the village, until they came in sight of the Badgah, against which they were to open fire. I myself, with one Company H. M.'s 60th Rifles and three Companies Fusiliers, went through the village, driving the Enemy, Cavalry and Infantry, before us. On reaching the other side of the suburbs, the Enemy appeared in considerable force on this side of the Badgah and at the angle of it nearest the City. Here a hot musketry fire was maintained for some time, until I sent orders for two of the Horse Artillery Guns to be brought from the outside of the Suburb to our support. On these Guns opening fire the Enemy appeared to loosen their hold of the position. Seeing this, I ordered the advance, which was made with a rush, and the position was ours. We captured a 9-Pounder Gun and its limber here in position, and the object of the attack having been effected, I, agreeably to orders received, brought the Column back into Camp about 7 P.M. The loss on our side, I am happy to say, was small; but I regret that it includes a gallant young Officer, Captain Brown, of the 1st Fusiliers, badly wounded. Every Officer and Man behaved as gallantly as men could do. To Major Jacob, 1st Fusiliers; Captain Williams, H. M.'s 60th Rifles; Lieutenant Wilson, in charge of the four Horse Artillery Guns; Lieutenant Perkins, of the Engineering who led the Column; and to Lieutenant Frith, \* Adjutant 1st Brigade Horse Artillery, who kindly accompanied me and rendered me the utmost service; also to Lieutenant Phillips, attached to H. M.'s 60th Rifles, who obligingly carried two or three messages for me my best thanks are due, and I beg to recommend them to the favourable notice of the Major General. The Guide Cavalry, under their Native Officer, Khanan Khan, Ressaldar, executed all orders given them.

Accompanying are Casualty Returns of the Force employed.

H. TOMBS, *Major,*  
*Commandg. the Column.*

\* "John" of the Letters, Lady Wilson's brother.

FROM

MAJOR C. REID,

*Commanding. 2nd Column,*

TO

MAJOR R. S. EWART,

*Depy. Asst. Adj. Genl.*

*Main Picquet, Hindoo Rao's House,*

*The 18th June 1857.*

Sir,

In obedience to instructions contained in a confidential letter from the Major-General Commanding the Forces, I have the honor to report for his

## ***The Mutiny day by day.***

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information, that I proceeded yesterday, at 4-15 p.m., with the Troops  
4 Companies 60th Rifles and Sirmoor Battalion. noted in the margin, to attack the position taken up by the Enemy at Kissengunge, simultaneous with the advance of the Column under Command of Major Tombs, Artillery. The two Columns met on the road near the Canal Bridge, when they struck off at right angles,—Major Tombs' Column taking the right and mine the left of a large garden which had a high brick wall round it. I proceeded to the end of the wall, and then entered a Serai to the right. After battering down the gates of two different Serais, I succeeded in entering Kissengunge, which I found full of Mutinee-s. Many rushed madly on; but were at once shot down by own Troops. I counted thirty-one bodies in one place near one of the Batteries, and nine were counted close to the Battery erected on the right of a building in the centre of Kissengunge. The enemy must have lost between fifty and sixty killed, and a very great number wounded. I completely destroyed the Batteries, which were not quite finished; burnt the Village, the timber used in constructing Batteries, the Magazine (which had evidently been made by Sappers) and the gates of the Serai, three in number. My loss very trifling. Three wounded in the four Companies 60th Rifles, one man killed in my own Regiment and two wounded.

This Report would have been forwarded earlier, but my time is fully occupied at this Picquet.

C. REID, *Major,*  
*Comdg. 2nd Column.*

FROM

MAJOR-GENERAL SIR H. BARNARD, K.C.B.,  
*Commanding Field Force,*

TO

THE ADJUTANT-GENERAL OF THE ARMY.

*Camp before Delhi, 23rd June 1857.*

Sir,

I have the honor to submit, for the information of the Commander-in-Chief, the Report of the Brigadier Grant, C.B., of the affair of the 19th instant.

These repeated attacks upon our position, with the small Force we have to repel them, are rendered most harassing by the uncertainty of the point on which it is to be threatened, it being always doubtful whether it is to be confined to one, and can only be successfully repulsed by the untiring and unflinching gallantry of the small bodies who alone can be directed

### ***The Mutiny day by day.***

against the Enemy; and I can assure you that, under no circumstances did Officers and Men merit greater praise.

I have to, deplore the loss of Lieutenant-Colonel Yule, 9th Lancers, an Officer of great merit, and Lieutenant Alexander, of the 3rd Native Infantry, a young Officer of much promise; also that Colonel Becher, Quarter Master General, and Captain Daly, of the Guides, were wounded; and that I shall be deprived for some time of the services of these Officers—an irreparable loss at this moment.

The Native Irregular Cavalry-man mentioned by Brigadier Grant, C.B., has been rewarded by the Order of Merit, which carries the highest Pension, and I would venture to recommend Privates Hancock and Purcell, 9th Lancers, for the Victoria Cross.

My thanks are due to Brigadier Grant, C.B., who on this, as on all occasions, evinces the highest qualifications of a Cavalry Officer.

Our loss, I regret to say, was severe; but taking the great superiority of the Enemy in number into consideration, I am only thankful it should not have been greater.

FROM

BRIGADIER J. H. GRANT, C. B.,

*Comdg. Cavy. Brigade, Field Force,*

TO

THE DEPY. ASST. ADJT. GENL. OF DIVISION.

*Head-Quarters Camp.*

*Camp, Delhi, 22nd June 1857.*

Sir,

On the afternoon of the 19th instant information was brought in, that the camp was to be attacked in the rear.

The safety of the Camp being under my direction, I immediately proceeded with a squadron of Her Majesty's 9th Lancers, two Guns of Major Scott's, two of Captain Money's, and two of Major Turner's, under Command of Lieutenant Bishop, to prevent the near approach of the Enemy to our Camp. When this Force got to the right of the Ochterlony Gardens, a



heavy fire of Artillery was opened upon it, to which our Guns replied. The Troops from Camp now began to arrive, and the action became general.

The Enemy had taken up a position about half a mile in rear of the Ochterlony Gardens, and from thence opened a very severe fire of round shot, grape and canister. I advanced our Guns right up to them, and our Artillery replied to their fire with the greatest spirit.

As long as it was light we succeeded in driving the Rebels back; but in the dusk of the evening, the Enemy, who were in great numbers, very nearly succeeded in turning our flank, and for some time two Guns were in great jeopardy.

If now became very dark; but I succeeded, with Lieutenant Martin, of the 9th Lancers, in getting a few men together, and we charged into the Enemy.

The Guns, I am happy to say, were saved; but a Waggon of Major Scott's Battery was blown up. I must not fail to mention the excellent conduct of a Sowar of the 4th Irregular Cavalry and two Men of the 9th Lancers—Privates John Hancock and John Purcell who, when my horse was shot down, remained by me throughout. One of these Men and the Sowar offered me their horses, and I was dragged out by the Sowar's horse. Private Hancock was severely wounded, and Private Purcell's horse was killed under him. The Sowar's name is Roopur Khan.

Our fire re-opened, and the Enemy were driven back to the Town.

On the left flank two Squadrons of the 9th Lancers under Colonel Yule, one Troop of the Carabiniers under Lieutenant Ellis, and the Guide Corps under Captain Daly, proceeded in support of Major Combs' and Major Turner's Guns. The former proceeded with the Guide Corps, the latter with the 9th Lancers in support, to the left of the Ochterlony Gardens, and both opened fire.

A squadron of the 9th Lancers, under Captain Anson, then charged down the road, and the 3rd Squadron, under Lieutenant Jones, with Colonel Yule, followed in support. Colonel Yule, I regret to say, fell at this time, having received a shot in his leg, and was killed by the enemy. He is a severe loss to the 9th Lancers.

The Guide Corps, under Captain Daly, gallantly charged twice, and I regret to say this excellent Officer was severely wounded in the shoulder; but the Enemy were beaten and retired to the Town.

The following morning I was ordered by the Major General Commanding to take a Force out on the same ground and drive the Enemy away if any were still left. I proceeded, but found only a strong Picquet of the Enemy, which was easily driven back, and we captured a Gun and two Waggon, which they had left the night previously.

I beg to bring to the immediate notice of Major-General Sir H. Barnard the names of the Officers who had Command of Guns and Squadrons:—Major Scott, Captain Money, and Lieutenant Bishop Commanded the Guns on the

***The Mutiny day by day.***

right, and nothing could be better than the way in which they brought their Guns forward and opened hem on the enemy fearless of danger; also Captain Head, who was on the right, and Capt in Anson and Lieutenant Jones, who commanded Squadrons on the left. The conduct of all has been reported most favourably to me. Major Turner's and Major Tombs' names, I presume, will be mentioned by Brigadier Wilson, and it would be needless my saying anything in their favour.

I beg also to bring the name of Captain Daly before Sir Henry, a most gallant and excellent Officer.

I regret to say the loss in the 9th Lancers was severe. Five men killed and eight wounded, and thirty one horses killed, wounded and missing.

J. H. GRANT, *Bridgr.*

*Comdg. Cavy. Brigade.*

No. 7-A.

FROM

THE ACTING ADJT. GENL. OF THE ARMY,

To

THE SECRETARY TO THE GOVERNMENT,

*Military Department.*

*Head Quarters Camp before Delhi,*

*The 6th July 1857.*

Sir,

In forwarding for submission to the Right Hon'ble the Governor General in Council the enclosed copy of a report from Major-General Sir H. Barnard, K. C. B., dated 28th ultimo, relative to the attacks of the Mutincers on the outposts of the Force on the 23rd idem, I am directed by the Provincial Commander-in-Chief to add his testimony to that of Sir H. Barnard, as to the persevering gallantry and endurance of the Troops engaged, both European and Native, of which Major-General Reed was himself for a portion of the day a witness.

2. The endurance displayed by the Troops throughout the whole day, under a scorching sun and without food, the

Provincial Commander-in-Chief considers to have been most praiseworthy, and well deserving the special commendation of the Government.

I have &c.,  
NEVILLE CHAMBERLAIN, *Brigdr. Genl.*,  
*Actg. Adj. Genl. of the Army.*

FROM

MAJOR-GENERAL SIR H. BANARD, K. C. B.,  
*Commanding Field Force,*

TO

THE ADJUTANT-GENERAL OF THE ARMY.

*Camp above Delhi, 28th June 1857.*

Sir,

I have the honor to report for the information of the Commander-in-Chief, that on the 23rd instant the Insurgents renewed their attack upon us, and owing to some religious feeling, kept it up during the whole day: knowing they had come out the Town the day before and had not been seen returning at night, I became anxious for the safety of a valuable Convoy, which was to march into Camp on the morning of the 23rd, and sent a strong escort out to meet it; this was successful; but the Convoy had scarcely arrived in Camp, ere my attention was called to the right or Hindoo Rao position, where, during whole of the rest of the day, the combat was maintained. The Enemy having lodged themselves in some loop-holed houses and a Serai and Mosque, occasioned some loss, and I regret to say Colonel Welchman, of the 1st Bengal European Fusiliers, was severely wounded.

The loss on the part of the Rebels was very serious.

FROM

CAPT &amp; BREVET MAJOR JOHN COKE,

*Commanding Department,*

TO

MAJOR R. S. EWART,

*Depty Asst. Adj. Genl. Field Force,**Camp before Delhi, 5th July 1857.*

Sir,

I have the honor to report, for the information of Major-General Sir H. Bernard, K.C.B., Commanding the Force before Delhi that, in accordance with instructions received, I marched with the force as per margin at half past 2 o'clock A.M. yesterday to attack a body of mutineers who had left Delhi on the previous evening on arriving at the junction of the roads from the City and Cantonment, it seemed very doubtful whether the rebels would return by the right or the left bank of the Canal from Aleepore. I therefore sent on Lieutenant Roberts by the main road to feel for the Enemy, and Captain Houson, of the Guides, to the right bank of the Canal.

I found the Enemy were retiring by the Rhotuck road to Delhi, but spread all over the country. On crossing the Canal, a considerable body with Guns were seen at a village about a mile from the Bridge, when I at once proceeded to attack them. After a few rounds from their Guns, they carried them off in the direction of the City before we could get up to them, which they were enabled to do as they were on a road, whereas we had to advance over the open country, which was in many places a swamp, through which the Guns and troops could only make their way with much difficulty.

A number of the Enemy were killed who had thrown themselves into the village on our front; the rest fled in every direction. The Cavalry of the Guides followed them with the greatest spirit, and succeeded in cutting up some more of the Enemy. It was useless to attempt any further pursuit, for the heat was great, and the European Soldiers exhausted. I therefore returned to the banks of the Canal, and allowed the men to rest under the shade of the trees.

While I was bringing the Infantry back, the Artillery by some misconception returned to Camp.

During the time we were resting under the trees on the Canal, the Enemy had collected their Force, and coming up under cover of the Canal,

## ***The Mutiny day by day.***

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made on attack on the Infantry. We beat them back, and pursued them for a distance; but seeing there was a large Force collecting behind them, I withdrew the Infantry and took up a position that commanded the Bridge, and, as I expected they were bringing up Guns, I sent into Camp for Artillery.

Before the Guns arrived, however, the Enemy made a second attack, and were beaten back with considerable loss.

Soon after, the Artillery and Cavalry came up, and followed the Enemy, who again dispersed and fled in all directions.

I left the Guns and Cavalry at the Canal Bridge and brought back the Infantry to Camp, where we arrived about 4 o'clock.

There were about 100 of the Enemy killed in these attacks.

Enclosed is a Return of our loss, which was very small.\*

No. 12-A.

FROM

MAJ. GEN. T. REED,

*Provincial Commander-in-Chief,*

TO

THE SECY. TO THE GOVT. OF INDIA.

*Military Department.*

*Camp before Delhi, 14th July 1857.*

Sir,

I have the honour to acquaint you, for the information of the Right Hon'ble the Governor-General in Council, that on the morning of the 9th instant, the right of our position was attacked by the Mutineers in great force, with nine Guns and Cavalry in support.

2. The usual reinforcements having been despatched to the Picquets on the flanks (at Hindoo Rao's house), the Troops which, in the mean time, had been held in readiness, were turned out on the irruption of some Mutineer Horse on our right rear, estimated at from 150 to 200 in number, which had driven in a small Picquet of the 9th Irregular Cavalry,

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\* 2 killed and 19 wounded.

### ***The Mutiny day by day.***

posted on that flank. The uniform of the Mutineers being precisely similar to that of the 9th Irregular Cavalry, great confusion was created by the circumstance, and led to the idea afterwards that the portion of that Corps in Camp had mutinied. A party of these Sowars having penetrated to some Guns preparing to move out of Camp, called upon the Native Gunners to join them; but they instead, true to their allegiance, called out to Major Olphert's Troop, which was unlimbered, to fire through them at the Insurgents.

3. A party of Foot Artillery now advanced, led by Captain Fagan, who had been writing in his tent close by, and had only time to relinquish his pen for a *tulwar*, and supported by a Company of the 1st Fusiliers, drove one portion of the Sowars out of Camp, having killed some fifteen of them; and the Guns at the Mound Battery on our right being brought round to bear, opened on them. In the mean time the remainder of the Sowars, on being discovered, were driven out at the rear by a Squadron 9th Lancers, Captain Hodson's Guide Cavalry, and a party of the 2nd Punjaub Cavalry, under Lieutenant Nicholson, under the direction of Brigadier Grant, C. B.

4. It having been reported to me that the gardens and enclosures on our right were full of the Enemy, I directed Available men of the Wing, H.M.'s 8th and 61st Regiments. a Column, composed as per margin, to be formed to drive 4th Sikh Infantry. them out, and soon after, having Major Scott's Battery. ing received a message from Brigadier General Chamberlain, who was detached to the rear, that all was quiet in that quarter, and requesting permission to bring a Force to the right for the purpose of performing the above service, I directed the Column referred to, to be placed under his orders, by which the Brigadier General was enabled to leave H.M.'s 75th Regiment in reserve in Camp.

5. At the same time I directed Major Reid, of the Sirmoor Battalion, in charge of the Picquets on our right front (Hindoo Rao's house) to advance on the approach of Brigadier General Chamberlain.

### ***The Mutiny day by day.***

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6. The result of this combined movement was that the Mutineers were driven with great loss under the cover of the Grape and Musketry from the walls of Delhi.

7. This success was not achieved without serious loss (I am sorry to say) as will appear by the accompanying Return,\* while from all reliable sources that of the Enemy must have been at least triple in amount.

8. It is with the highest gratification I have the honor of forwarding the enclosed Report of the heroic conduct of two Officers,—Major Tombs and Second Lieutenant Hills, of the 2d Troop 1st Brigade Horse Artillery. It is unnecessary for me to make any further comment on Lieutenant-Colonel Mackenzie's Report, than to observe that the conduct of these Officers has always been conspicuous for distinguished gallantry, for the display of which, owing to his standing in the service, Major Tombs has had more opportunities; and that in recommending them to the most favourable consideration of the Governor General in Council, I consider them to be worthy of the highest distinction that can be awarded to valour and heroism.

9. I take this opportunity of recording the meritorious and on efficient services afforded to me upon this occasion, and on every former one, to my lamented predecessor in the Command of this Force, not only by my own Personal and Divisional Staff, but also by the Officers of the Headquarters Staff of the Army, who, with my concurrence, placed themselves at the disposal of Major General Sir H. Barnard, and I feel assured I am acting in accordance with his intentions and wishes, in bringing to the favorable notice of His Lordship in Council the valuable services of Brigadier General Chamberlain, Acting Adjutant General; Captain Norman, Assistant Adjutant General of the Army, who from the death of Colonel Chester, until the arrival of Brigadier

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\* 43 killed, 172 wounded.

***The Mutiny day by day.***

General Chamberlain on the 24th ultimo, acted as Adjutant General; Colonel Congreve, C.B., Acting Adjutant General, Her Majesty's Forces; Lieutenant Colonel Hon'ble R. W. P. Curzon, Acting Quarter Master General, Her Majesty's Forces; Lieutenant-Colonel Young, Judge Advocate General; and Captain Garstin, Officiating Deputy Assistant Quarter Master General. Colonel Becher, I regret to say, has been prevented by the severe wound received on the 19th ultimo, from accompanying myself or Sir H. Barnard into the Field; but his exertions in the performance of his official duties have been unceasing.

I have &c.,  
 THOMAS REED, *Maj.-Gen.*  
*Provincial Commander-in-Chief.*

No. 37 A.

FROM

BRIGADIER A. WILSON,  
*Commandant of Artillery,*

TO

THE ACTING ADJT. GENL. OF THE ARMY.  
*Dated Head Quarters of Artillery,*  
*Camp before Delhi, 10th July 1857.*

Sir,

I have much pleasure in forwarding, for submission to the Commander of the Forces, the accompanying copy of a Report, No. 83, of this day's date, I have received from Brevet Lieutenant-Colonel Mackenzie, Commanding 1st Brigade Horse Artillery, of the gallant conduct of Major Tombs and Second Lieutenant Hills, of the 2nd Troop of his Brigade, when surprised by the Enemy's Cavalry yesterday morning; and to state that I shall feel gratified by any mark of approbation or reward the Commander of the Forces may deem fit to award or recommend them for.



## ***The Mutiny day by day.***

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**FROM**

**LIEUTENANT-COLONEL M. MACKENZIE,**  
*Commanding 1st Brigade Horse Artillery,*

**TO**

**BRIGADIER A. WILSON,**  
*Commandant of Artillery.*

*Camp near Delhi, 10th July 1857.*

**Sir,**

It is with great pleasure I submit, for the information of the Brigadier Commandant, the following account of the very gallant conduct of Second Lieutenant James Hills, of the 2nd Troop 1st Brigade, Horse Artillery, and the noble behaviour of his Commanding Officer, Major H. Tombs, in twice coming to his Subaltern's rescue, and on each occasion killing his man.

Yesterday the 9th instant, Second Lieutenant J. Hills was on Picquet duty, with two Guns at the Mound, to the right of Camp. About 11 o'clock A.M., there was a rumour that the Enemy's Cavalry were coming down on this post. Lieutenant Hills proceeded to take up the position assigned in case of alarm; but before he reached the spot, he saw the Enemy close upon his Guns before they had time to form up. To enable him to do this, Lieutenant Hills boldly charged single-handed the head of the Enemy's column, cut down the first man, struck the second, and was then ridden down horse and all. On getting up and searching for his sword, three more men came at him (two mounted); the first man he wounded with his pistol; he caught the lance of the second with his left hand, and wounded him with his sword, the first man then came on again and was cut down; the third man (on foot) then came up, and wrenched the sword from the hand of Lieutenant Hills (who fell in the struggle), and the Enemy was about to cut him down, when Major Tombs, who had gone up to visit his two guns, saw what was going on, rushed in, and shot the man and saved Lieutenant Hills.

By this time the enemy's Cavalry had passed by, and Major Tombs, and Lieutenant Hills went to look after the wounded men when Lieutenant Hills observed one of the Enemy passing with his (Lieutenant Hills') pistol. They walked towards him, the man began flourishing his sword and dancing about. He first cut at Lieutenant Hills, who parried the blow, and he then turned on Major Tombs, who received the blow in the same manner. His second attack on Lieutenant Hills was (I regret to say) more successful, as he was cut down with a bad sword cut on the head, and would no doubt have been killed, had not Major Tombs rushed in and put his sword through the man. I feel convinced that such gallant conduct on the part of these two Officers, has only to be brought properly forward to meet with an appropriate reward.

***The Mutiny day by day.***

Major Tombs was saved from a severe sword-cut on the head by the wadded head dress he wore.

I have to apologize for the writing of this letter, as it is written from a sick-bed.\*

No. 13 A.

FROM

MAJ. GEN. T. REED,

*Comdg. Field Force and Provl. C.-in-C.*

TO

THE SECY. TO THE GOVT. OF INDIA,

*Military Department.*

*Camp before Delhi, 16th July 1857.*

Sir,

On the morning of the 14th, the Mutineers moved out of the city and attacked our Batteries at Hindoo Rao's house\*

\* *Picquets at the Batteries.*

Detachments H. M.'s. 60th Rifles and 75th Regiment, Sirmoor Battalion, Guide Infantry.

*Subzee Mundy Picquet.*

180 of H. M.'s. 8th and 61st Regiments.

and Picquet in the Subzee Mundy suburb, all under the Command of Major Reid, of the Sirmoor Battalion. Our Troops remained on the defence until 3 P.M., maintaining their position against a force believed

to consist of twenty Regiments of Infantry, a large body of Cavalry, and several Field Pieces, and supported by a fire of heavy Artillery from the walls.

2. At 3 o'clock a Column was formed, as per margin, under Command of Brigadier Six Horse Artillery Guns of Major Turner's and Captain Money's Troops, with both these Officers. 1st Fusiliers, under Major Jacob. 1st Punjaub Infantry, under Major Coke. 5th Mundy suburb, all under the Command of Major Reid, of the Sirmoor Battalion. Our Troops remained on the defence until 3 P.M., maintaining their position against a force believed to consist of twenty Regiments of Infantry, a large body of Cavalry, and several Field Pieces, and supported by a fire of heavy Artillery from the walls.

under Command of Brigadier Showers, to drive the Enemy out of the suburbs; Major Reid, with the Troops from Hindoo Rao's Picquet, co-operating on the left.

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\* He had been wounded by a shell on the 2nd July.

3. This service was effectually and gallantly performed and the Enemy driven in confusion and with much loss, under the cover of a very heavy fire of Grape and Musketry from the walls of Delhi, and very nearly losing some of the Field Guns they had brought outside.

4. Our own loss, I am sorry to say, was severe, as will be seen by the accompanying Return, † and I extremely regret to report that Brigadier General Chamberlain, the Acting Adjutant General of the Army, who accompanied Brigadier Showers' Column, was severely wounded. The duties of the Adjutant General's Department have therefore again devolved on Captain Norman.

5. Yesterday and to-day the Enemy have remained perfectly quiet, with the exception of a fire of Artillery at intervals from the walls, to which our heavy Batteries have replied.

I have, etc.,

THOMAS REED, *Maj.-Gen.*,  
*Comdg. Field Force and Provl. C.-in-C.*

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GENERAL ORDERS BY MAJOR-GENERAL T. REED, C.B.,  
PROVINCIAL COMMANDER-IN-CHIEF.

*Head Quarters, Camp before Delhi, 17th July 1857.*

Lieutenant-General Sir P. Grant, K.C.B., having, in General Order dated the 17th June at Calcutta, announced his having assumed Command of the Bengal Army from that date, Major-General Reed has ceased to exercise the duties of Provincial Commander-in-Chief.

Major-General Reed having been recommended by his Medical Advisers to avail himself of a Sick Certificate to repair to the Hills as his only chance of recovering his shattered health, which has latterly prevented him from taking an active

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† 17 killed, 193 wounded.

### ***The Mutiny day by day.***

right, and nothing could be better than the way in which they brought their Guns forward and opened hem on the enemy fearless of danger; also Captain Head, who was on the right, and Capt in Anson and Lieutenant Jones, who commanded Squadrons on the left. The conduct of all has been reported most favourably to me. Major Turner's and Major Tombs' names, I presume, will be mentioned by Brigadier Wilson, and it would be needless my saying anything in their favour.

I beg also to bring the name of Captain Daly before Sir Henry, a most gallant and excellent Officer.

I regret to say the loss in the 9th Lancers was severe. Five men killed and eight wounded, and thirty one horses killed, wounded and missing.

J. H. GRANT, *Bridgr.*

*Comdg. Cavy. Brigade.*

No. 7-A.

FROM

THE ACTING ADJT. GENL. OF THE ARMY,

To

THE SECRETARY TO THE GOVERNMENT,

*Military Department.*

*Head Quarters Camp before Delhi,*

*The 6th July 1857.*

Sir,

In forwarding for submission to the Right Hon'ble the Governor General in Council the enclosed copy of a report from Major-General Sir H. Barnard, K. C. B., dated 28th ultimo, relative to the attacks of the Mutincers on the outposts of the Force on the 23rd idem, I am directed by the Provincial Commander-in-Chief to add his testimony to that of Sir H. Barnard, as to the persevering gallantry and endurance of the Troops engaged, both European and Native, of which Major-General Reed was himself for a portion of the day a witness.

2. The endurance displayed by the Troops throughout the whole day, under a scorching sun and without food, the

Provincial Commander-in-Chief considers to have been most praiseworthy, and well deserving the special commendation of the Government.

I have &c.,  
NEVILLE CHAMBERLAIN, *Brigdr. Genl.*,  
*Actg. Adj. Genl. of the Army.*

FROM

MAJOR-GENERAL SIR H. BANARD, K.C.B.,  
*Commanding Field Force,*

To

THE ADJUTANT-GENERAL OF THE ARMY.

*Camp above Delhi, 28th June 1857.*

Sir,

I have the honor to report for the information of the Commander-in-Chief, that on the 23rd instant the Insurgents renewed their attack upon us, and owing to some religious feeling, kept it up during the whole day: knowing they had come out the Town the day before and had not been seen returning at night, I became anxious for the safety of a valuable Convoy, which was to march into Camp on the morning of the 23rd, and sent a strong escort out to meet it; this was successful; but the Convoy had scarcely arrived in Camp, ere my attention was called to the right or Hindoo Rao position, where, during whole of the rest of the day, the combat was maintained. The Enemy having lodged themselves in some loop-holed houses and a Serai and Mosque, occasioned some loss, and I regret to say Colonel Welchman, of the 1st Bengal European Fusiliers, was severely wounded.

The loss on the part of the Rebels was very serious.

**The Mutiny day by day.**

No. 89.

FROM

CAPT &amp; BREVET MAJOR JOHN COKE,

*Commanding Department,*

To

MAJOR R. S. EWART.

*Depty Asst. Adjtl. Genl. Field Force,**Camp before Delhi, 5th July 1857.*

Sir,

I have the honor to report, for the information of Major-General Sir H. Bernard, K.C.B., Commanding the Force before Delhi that, in accordance with instructions received, I marched with the Force as per margin at half past 2 o'clock A.M. yesterday to attack a body of mutineers who had left Delhi on the previous evening. On arriving at the junction of the roads from the City and Cantoment, it seemed very doubtful whether the Rebels would return by the right or the left bank of the Canal from Aleepore. I therefore sent Lieutenant Roberts by the main road to feel for the Enemy, and Captain Houson, of the Guides, to the right bank of the Canal.

2 Guns, Sqn. Tp. of 1st Bde. H. Arty.  
 4 Guns, 2nd .. ..  
 3rd Co. 3rd Bn. Arty. and No. 14 Light Field Battery.  
 Squadron H. M.'s 6th Dragoon Guards.  
 The Guide Cavalry.  
 Head Quarters and Wing H. M.'s 61st Regiment.  
 1st Punjab Infantry.

I found the Enemy were retiring by the Rhotuck road to Delhi, but spread all over the country. On crossing the Canal, a considerable body with Guns were seen at a village about a mile from the Bridge, when I at once proceeded to attack them. After a few rounds from their Guns, they carried them off in the direction of the City before we could get up to them, which they were enabled to do as they were on a road, whereas we had to advance over the open country, which was in many places a swamp, through which the Guns and troops could only make their way with much difficulty.

A number of the Enemy were killed who had thrown themselves into the village on our front; the rest fled in every direction. The Cavalry of the Guides followed them with the greatest spirit, and succeeded in cutting up some more of the Enemy. It was useless to attempt any further pursuit, for the heat was great, and the European Soldiers exhausted. I therefore returned to the banks of the Canal, and allowed the men to rest under the shade of the trees.

While I was bringing the Infantry back, the Artillery by some misconception returned to Camp.

During the time we were resting under the trees on the Canal, the Enemy had collected their Force, and coming up under cover of the Canal,

## ***The Mutiny day by day.***

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made on attack on the Infantry. We beat them back, and pursued them for a distance; but seeing there was a large Force collecting behind them, I withdrew the Infantry and took up a position that commanded the Bridge, and, as I expected they were bringing up Guns, I sent into Camp for Artillery.

Before the Guns arrived, however, the Enemy made a second attack, and were beaten back with considerable loss.

Soon after, the Artillery and Cavalry came up, and followed the Enemy, who again dispersed and fled in all directions.

I left the Guns and Cavalry at the Canal Bridge and brought back the Infantry to Camp, where we arrived about 4 o'clock.

There were about 100 of the Enemy killed in these attacks.

Enclosed is a Return of our loss, which was very small.\*

No. 12-A.

FROM

MAJ. GEN. T. REED,

*Provincial Commander-in-Chief,*

TO

THE SECY. TO THE GOVT. OF INDIA.

*Military Department.*

*Camp before Delhi, 14th July 1857.*

Sir,

I have the honour to acquaint you, for the information of the Right Hon'ble the Governor-General in Council, that on the morning of the 9th instant, the right of our position was attacked by the Mutineers in great force, with nine Guns and Cavalry in support.

2. The usual reinforcements having been despatched to the Picquets on the flanks (at Hindoo Rao's house), the Troops which, in the mean time, had been held in readiness, were turned out on the irruption of some Mutineer Horse on our right rear, estimated at from 150 to 200 in number, which had driven in a small Picquet of the 9th Irregular Cavalry,

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\* 2 killed and 19 wounded.

***The Mutiny day by day.***

posted on that flank. The uniform of the Mutineers being precisely similar to that of the 9th Irregular Cavalry, great confusion was created by the circumstance, and led to the idea afterwards that the portion of that Corps in Camp had **mutinied**. A party of these Sowars having penetrated to some Guns preparing to move out of Camp, called upon the Native Gunners to join them; but they instead, true to their allegiance, called out to Major Olphert's Troop, which was unlimbered, to fire through them at the Insurgents.

3. A party of Foot Artillery now advanced, led by Captain Fagan, who had been writing in his tent close by, and had only time to relinquish his pen for a *tulwar*, and supported by a Company of the 1st Fusiliers, drove one portion of the Sowars out of Camp, having killed some fifteen of them; and the Guns at the Mound Battery on our right being brought round to bear, opened on them. In the mean time the remainder of the Sowars, on being discovered, were driven out at the rear by a Squadron 9th Lancers, Captain Hodson's Guide Cavalry, and a party of the 2nd Punjaub Cavalry, under Lieutenant Nicholson, under the direction of Brigadier Grant, C. B.

4. It having been reported to me that the gardens and enclosures on our right were full of the Enemy, I directed Available men of the Wing, H.M.'s 8th and 61st Regiments. a Column, composed as per margin, to be formed to drive them out, and soon after, having received a message from Major Scott's Battery. Brigadier General Chamberlain, who was detached to the rear, that all was quiet in that quarter, and requesting permission to bring a Force to the right for the purpose of performing the above service, I directed the Column referred to, to be placed under his orders, by which the Brigadier General was enabled to leave H.M.'s 75th Regiment in reserve in Camp.

5. At the same time I directed Major Reid, of the Sirmoor Battalion, in charge of the Picquets on our right front (Hindoo Rao's house) to advance on the approach of Brigadier General Chamberlain,



6. The result of this combined movement was that the Mutineers were driven with great loss under the cover of the Grape and Musketry from the walls of Delhi.

7. This success was not achieved without serious loss (I am sorry to say) as will appear by the accompanying Return,\* while from all reliable sources that of the Enemy must have been at least triple in amount.

8. It is with the highest gratification I have the honor of forwarding the enclosed Report of the heroic conduct of two Officers,—Major Tombs and Second Lieutenant Hills, of the 2nd Troop 1st Brigade Horse Artillery. It is unnecessary for me to make any further comment on Lieutenant-Colonel Mackenzie's Report, than to observe that the conduct of these Officers has always been conspicuous for distinguished gallantry, for the display of which, owing to his standing in the service, Major Tombs has had more opportunities; and that in recommending them to the most favourable consideration of the Governor General in Council, I consider them to be worthy of the highest distinction that can be awarded to valour and heroism.

9. I take this opportunity of recording the meritorious and on efficient services afforded to me upon this occasion, and on every former one, to my lamented predecessor in the Command of this Force, not only by my own Personal and Divisional Staff, but also by the Officers of the Headquarters Staff of the Army, who, with my concurrence, placed themselves at the disposal of Major General Sir H. Barnard, and I feel assured I am acting in accordance with his intentions and wishes, in bringing to the favorable notice of His Lordship in Council the valuable services of Brigadier General Chamberlain, Acting Adjutant General; Captain Norman, Assistant Adjutant General of the Army, who from the death of Colonel Chester, until the arrival of Brigadier

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\* 43 killed, 172 wounded.

***The Mutiny day by day.***

General Chamberlain on the 24th ultimo, acted as Adjutant General; Colonel Congreve, C.B., Acting Adjutant General, Her Majesty's Forces; Lieutenant Colonel Hon'ble R. W. P. Curzon, Acting Quarter Master General, Her Majesty's Forces; Lieutenant-Colonel Young, Judge Advocate General; and Captain Garstin, Officiating Deputy Assistant Quarter Master General. Colonel Becher, I regret to say, has been prevented by the severe wound received on the 19th ultimo, from accompanying myself or Sir H. Barnard into the Field; but his exertions in the performance of his official duties have been unceasing.

I have &c.,  
 THOMAS REED, *Maj.-Gen.*  
*Provincial Commander-in-Chief.*

No. 37 A.

FROM

BRIGADIER A. WILSON,  
*Commandant of Artillery,*

To

THE ACTING ADJT. GENL. OF THE ARMY.

*Dated Head Quarters of Artillery,  
 Camp before Delhi, 10th July 1857.*

Sir,

I have much pleasure in forwarding, for submission to the Commander of the Forces, the accompanying copy of a Report, No. 83, of this day's date, I have received from Brevet Lieutenant-Colonel Mackenzie, Commanding 1st Brigade Horse Artillery, of the gallant conduct of Major Tombs and Second Lieutenant Hills, of the 2nd Troop of his Brigade, when surprised by the Enemy's Cavalry yesterday morning; and to state that I shall feel gratified by any mark of approbation or reward the Commander of the Forces may deem fit to award or recommend them for.

## ***The Mutiny day by day.***

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FROM

LIEUTENANT-COLONEL M. MACKENZIE,  
*Commanding 1st Brigade Horse Artillery,*

TO

BRIGADIER A. WILSON,  
*Commandant of Artillery.*

*Camp near Delhi, 10th July 1857.*

Sir,

It is with great pleasure I submit, for the information of the Brigadier Commandant, the following account of the very gallant conduct of Second Lieutenant James Hills, of the 2nd Troop 1st Brigade, Horse Artillery, and the noble behaviour of his Commanding Officer, Major H Tombs, in twice coming to his Subaltern's rescue, and on each occasion killing his man.

Yesterday the 9th instant, Second Lieutenant J. Hills was on Picquet duty, with two Guns at the Mound, to the right of Camp. About 11 o'clock A.M., there was a rumour that the Enemy's Cavalry were coming down on this post. Lieutenant Hills proceeded to take up the position assigned in case of alarm; but before he reached the spot, he saw the Enemy close upon his Guns before they had time to form up. To enable him to do this, Lieutenant Hills boldly charged single-handed the head of the Enemy's column, cut down the first man, struck the second, and was then ridden down horse and all. On getting up and searching for his sword, three more men came at him (two mounted); the first man he wounded with his pistol; he caught the lance of the second with his left hand, and wounded him with his sword, the first man then came on again and was cut down; the third man (on foot) then came up, and wrenched the sword from the hand of Lieutenant Hills (who fell in the struggle), and the Enemy was about to cut him down, when Major Tombs, who had gone up to visit his two guns, saw what was going on, rushed in, and shot the man and saved Lieutenant Hills.

By this time the enemy's Cavalry had passed by, and Major Tombs, and Lieutenant Hills went to look after the wounded men when Lieutenant Hills observed one of the Enemy passing with his (Lieutenant Hills') pistol. They walked towards him, the man began flourishing his sword and dancing about. He first cut at Lieutenant Hills, who parried the blow, and he then turned on Major Tombs, who received the blow in the same manner. His second attack on Lieutenant Hills was (I regret to say) more successful, as he was cut down with a bad sword cut on the head, and would no doubt have been killed, had not Major Tombs rushed in and put his sword through the man. I feel convinced that such gallant conduct on the part of these two Officers, has only to be brought properly forward to meet with an appropriate reward.

***The Mutiny day by day.***

Major Tombs was saved from a severe sword-cut on the head by the wadded head dress he wore.

I have to apologize for the writing of this letter, as it is written from a sick-bed.\*

No. 13 A.

FROM

MAJ. GEN. T. REED,  
*Comdg. Field Force and Provl. C.-in-C.*

TO

THE SECY. TO THE GOVT. OF INDIA,  
*Military Department.*  
*Camp before Delhi, 16th July 1857.*

Sir,

On the morning of the 14th, the Mutineers moved out of the city and attacked our Batteries at Hindoo Rao's house\*

\* *Picquets at the Batteries.*

Detachments H. M.'s. 60th Rifles and 75th Regiment, Sirmoor Battalion, Guide Infantry.

*Subzee Mundy Picquet.*

180 of H. M.'s. 8th and 61st Regiments.

and Picquet in the Subzee Mundy suburb, all under the Command of Major Reid, of the Sirmoor Battalion. Our Troops remained on the defence until 3 P.M., maintaining their position against a force believed

to consist of twenty Regiments of Infantry, a large body of Cavalry, and several Field Pieces, and supported by a fire of heavy Artillery from the walls.

2. At 3 o'clock a Column was formed, as per margin,

Six Horse Artillery Guns of Major Turner's and Captain Money's Troops, with both these Officers.

1st Fusiliers, under Major Jacob.  
1st Punjaub Infantry, under Major Coke.

under Command of Brigadier Showers, to drive the Enemy out of the suburbs; Major Reid, with the Troops from Hindoo Rao's Picquet, co-operating on the left.

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\* He had been wounded by a shell on the 2nd July.

3. This service was effectually and gallantly performed and the Enemy driven in confusion and with much loss, under the cover of a very heavy fire of Grape and Musketry from the walls of Delhi, and very nearly losing some of the Field Guns they had brought outside.

4. Our own loss, I am sorry to say, was severe, as will be seen by the accompanying Return, † and I extremely regret to report that Brigadier General Chamberlain, the Acting Adjutant General of the Army, who accompanied Brigadier Showers' Column, was severely wounded. The duties of the Adjutant General's Department have therefore again devolved on Captain Norman.

5. Yesterday and to-day the Enemy have remained perfectly quiet, with the exception of a fire of Artillery at intervals from the walls, to which our heavy Batteries have replied.

I have, etc.,

THOMAS REED, *Maj.-Gen.*,  
*Comdg. Field Force and Provl. C.-in-C.*

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GENERAL ORDERS BY MAJOR-GENERAL T. REED, C.B.,  
PROVINCIAL COMMANDER-IN-CHIEF.

*Head Quarters, Camp before Delhi, 17th July 1857.*

Lieutenant-General Sir P. Grant, K.C.B., having, in General Order dated the 17th June at Calcutta, announced his having assumed Command of the Bengal Army from that date, Major-General Reed has ceased to exercise the duties of Provincial Commander-in-Chief.

Major-General Reed having been recommended by his Medical Advisers to avail himself of a Sick Certificate to repair to the Hills as his only chance of recovering his shattered health, which has latterly prevented him from taking an active

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† 17 killed, 193 wounded.

part in the Field operations, has made over the Command and charge of his Force to Brigadier General A. Wilson.

It is with the greatest reluctance the Major-General has come to the determination to take this step, but his duty to his Country must be paramount to any selfish consideration, and being incapacitated himself for the post by disease and weakness, he has no alternative but to devolve his arduous duties upon another.

Of Brigadier General Wilson's merits it is unnecessary for Major-General Reed to speak; his judgment, gallantry, and conduct have been conspicuous since he led his small, but victorious, band from Meerut, up to his day.

It only remains for the Major-General to congratulate the Forces before Delhi on being placed under so able a Commander as Brigadier General Wilson.

Major-General Reed takes this opportunity of requesting the Head Quarters and Divisional Staff to accept his thanks for the great assistance received by him and his lamented predecessor, Major-General Sir H. Barnard, K.C.B., not only in the exercise of their Departmental duties, but also in the operations in the Field.

To Brigadier General Chamberlain, Acting Adjutant General of the Army; Colonel Congreve, C.B., Acting Adjutant General, Her Majesty's Forces; Colonel Becher, Quarter Master General of the Army; Lieutenant-Colonel the Hon'ble R.W.P. Curzon, Acting Quarter Master General, Her Majesty's Forces; Lieutenant-Colonel Young, Judge Advocate General; Captain Norman, Assistant Adjutant General of the Army; Captains Garstin and Hodson, Officiating Deputy Assistant Quarter Masters General of the Army; Major Ewart, Deputy Assistant Adjutant General; Captain Stewart, Officiating Deputy Assistant Adjutant General; Captain Maisey, Deputy Judge Advocate General and Captain Shute, Deputy Assistant Quarter Master General of Division—his acknowledgements are entirely due.

The Major-General's warmest thanks are due to the whole Artillery of the Force, who have on all occasions behaved with conspicuous gallantry, and have even maintained the reputation of their distinguished Corps.

To Lieutenant-Colonel Baird Smith and the Engineer Department, Major-General Reed offers his most sincere acknowledgments for the valuable services they have rendered.

To Lieutenant-Colonel Thomson, Deputy Commissary General, and his Assistants; to Superintending Surgeon Tritton, and all the Officers of the Medical Department—the Major-General's best thanks are due for their indefatigable and successful exertions.

To Brigadiers Grant, Longfield, Jones and Showers, and to the gallant Officers and Troops, European and Native, under their orders, the Major-General begs to award his tribute of admiration for their brilliant and distinguished conduct in a succession of attacks, in which the Enemy have on every occasion been repulsed. The behaviour of the Troops has been beyond all praise.

Major-General Reed cannot forbear from recording the name of Major Reid as having commanded the Post, which has been subject to the most frequent and constant attacks of the Enemy, from which they have always been driven with great loss by the able dispositions of that Officer, so admirably seconded by the Troops under his Command, comprising parties of H. M.'s 60th Royal Rifles, and other Corps, with the gallant Sirmoor Battalion and Corps of Guides.

In conclusion, the Major-General desires to express his thanks to the Officers of his Personal Staff for the uniform assistance he has received from them upon every occasion, and he only regrets he has not had more frequent opportunities of witnessing their distinguished conduct in the Field—to Captains Lowe, Reid and Turnbull, Aides-de-Camp; to Assistant Surgeon W. F. Mactier, and to Lieutenant R. C. Low,

***The Mutiny day by day.***

Orderly Officer; as well as to Lieutenant W. H. Greathed, of Engineers, who acted as A.D.C. to the General Commanding from the 7th ultimo, besides performing the duty of Field Engineer when his services were needed in that capacity.

No. 1424.

FROM

BRIGADIER GENERAL A. WILSON,  
*Comdg. Field Force,*

TO

THE ACTING ADJT. GENL. OF THE ARMY.

*Camp before Delhi, 12th August 1857.*

Sir,

I have the honour to transmit a Return of the Casualties (killed and wounded)\* of the Field Force under my Command, which occurred during the attack on our out-posts by the Mutineers on the 18th, 20th and 23rd of last month, and to attach the Reports of the Officers Commanding the Columns which I directed to be formed to dislodge the Mutineers from the position taken up by them in front of the Subzee Mundy and Main Picquets.

On the 18th this service was gallantly and efficiently performed by the Troops under the Command of Lieutenant-Colonel Jones, of H. M.'s 60th Rifles. From the numerous enclosures and broken ground occupied by the Insurgents, they were enabled to offer a continued and determined resistance; but which, from the disposition of the Troops under his Command, made by Lieutenant-Colonel Jones, was successfully overcome, and the Mutineers driven with severe loss into the Town.

The Column under the command of Lieutenant-Colonel Seaton, C. B., of the 35th Regiment Native Infantry, employed on the 20th, had for its object the dislodgement of the Mutineers from nearly the same position as they occupied on the 18th instant.

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\*29 killed, 113 wounded.



The attack made on the 20th having commenced about 9 a. m., and been maintained for several hours, a movement towards their flank and rear became necessary to relieve the posts attacked, and which the advance of the Column under Lieutenant-Colonel Seaton, C. B., completely effected.

On the morning of the 23rd the Mutineers having moved out in force from the Cashmere Gate of the City, and attacked the centre and left front of our position, when perceiving as they moved to our right, that by a flank movement from our left the Insurgents would be compelled to retire and possibly with the loss of some of their Guns, I directed Brigadier Showers to take command of the Troops marginally noted in his Report, and engage the Mutineers from the points and in the manner detailed by him.

Brigadier Showers ably performed the service entrusted to him, and the result was as anticipated—the speedy retirement of the Insurgents into the City.

Each of these Columns of attack against the Mutineers was most ably led and my orders fully carried out by the Officers Commanding them; and I beg to record my thanks to Brigadier Showers, Lieutenant-Colonels Jones and Seaton individually, and to the Officers and Men collectively, for the zeal and gallantry displayed by all on each occasion.

FROM

LIEUT. COL. F. SEATON.

*Camp Delhi, 21st July 1857.*

Sir,

I have the honour to report, for the information of the Brigadier General

Her Majesty's 75th	..	150
1st K. B. Fusiliers	..	400
Guides	..	200
Total	..	750

Horse Artillery Guns, Party of Sappers and Miners.

Commanding the Field Force, that having assumed Command yesterday of the party named in the margin, I proceeded to carry out the instructions given to me in person by the Brigadier General. I moved off at half past 3, and on reaching the Trunk Road leading

through the Subzee Mundy, I threw the Infantry of the Guides into the mass of Gardens to the South of the road, and supported them by a party

## ***The Mutiny day by day.***

of the 1st European Bengal Fusiliers. I directed Lieutenant W.S.R. Hodson to sweep through the gardens in skirmishing order, feeling on to the banks of the Canal, to drive before him any Enemy he might find, and to halt when he came in a line with the Picquet in the Serai.

Whilst this operation was going on, I moved the Column slowly down the road, halting at intervals. I rode on to the Serai to make observations on the Subzee Mundy Village and enquiries as to any Enemy it might contain.

The Skirmishers shortly emerged from the gardens, not having met with any of the Enemy or traces of any Earth-Works or Entrenchments of any kind; I then took the Column into the Subzee Mundy Village, and found it utterly deserted.

There only now remained for me to search the upper part of the gardens between the Canal and the new escape cut; therefore sending the Guns with a suitable guard up the road to the point whence I started, I proceeded with the Column up to the banks of the Canal to within a short distance of the Pool Chudder Aqueduct. Then directing the column, with a cross road leading towards Camp and instructing the Senior Officer to march slowly along, I formed a Rear Guard of the Guides (those with Lieutenant Hodson), rode up to the aqueduct, and examined that small corner of ground. Finding neither traces of any Enemy or of Entrenchments we rejoined the Column.

In the mean time a small body of the Enemy had come out of Trevilian Gunge and followed our retiring steps, firing at a considerable distance, but gradually creeping up.

As we came to an open space in the midst of a mass of gardens, they got to within 100 yards of us, and some of them exposed themselves on the garden walls, as if about to make a rush of the Rear Guard; but the Guides, admirably posted by that excellent Officer, Lieutenant Hodson, gave them a volley with a cheer, which drove them off precipitately, and I returned to Camp without further molestation. The casualties were only two men slightly wounded.

FROM

LIEUT. COLONEL JOHN JONES,

*H. M.'s 60th Royal Rifles.*

*Camp before Delhi, 31st July 1857.*

Sir,

I have to report, for the information of the Brigadier General Commanding

Four Field Guns.

Part of H. M.'s 8th Regt.

Part of H. M.'s 61st Regt.

Part of H. M.'s 75th Regt.

Some Sikh Infantry, and Captain

Hodson's Punjnah Cavalry.

the Field force, that about 1 P. M. on the 18th instant, I received orders to take Command of a moveable Column consisting of the Troops named in the margin, and to proceed to the Subzee Mundy and ground in front of it, and drive the Enemy back, who were there in position. On arriving at the pucks

road leading to the Subzee Mundy, I ordered the Sikhs into the wood on the light of the road, and to advance in skirmishing order, their left resting on

the road and their right on the Canal, the remainder of the Column advancing along the road, the head of it being in line with the Skirmishers in cover. On arriving at the Subzee Mundy. I ordered H. M.'s 75 Regiment to enter the village and to advance through it and clear it, which duty they performed ; but were detained some time at a Serai before they could drive the Enemy from it : but eventually they succeeded. During this time the remainder of the Column was on the road to the Subzee Mundy, with the exception of two Guns supported by Cavalry and Infantry, which I advanced. On H. M.'s 75th moving on, I advanced the whole of the Column to the gate leading up to Hindoo Rao's house, and then took the road to the right and crossed the Canal, placing two Guns in position on the first road leading to the City, and advancing the other two to a road parallel to the first. On arriving there, the Enemy were stationed behind the crest of a hill to our right, when I opened fire on them with round shot and the Infantry with musketry. Before being able to get the second two Guns up, I was obliged to clear that part of the Subzee Mundy of the Enemy. Having driven the Enemy from the ground I was ordered to clear, I remained in position, until I received orders to retire, which I did by alternate half-batteries, each supported by Cavalry and Infantry as the Enemy attempted to show themselves, which entirely prevented their advancing. On arriving at the gateway leading to Hindoo Rao's house, I left two Guns and a troop of Cavalry with Major Reid, who was in position there with his Regiment of Goorkas. I then retired the remainder of the force into Camp.

FROM

BRIGADIER ST. G. D. SHOWERS,

*Commanding 1st Infantry Brigade.*

*Dated Camp before Delhi, 3rd August 1857.*

Sir,

I have the honour to report for the information of Brigadier General

6 Guns under Major Turner.

H. M.'s 8th Foot, 130 Rank and File.

H. M.'s 61st Foot, 78 Rank and File.

1st European Bengal Fusiliers, 200 Rank and File.

Coke's Punjab Corps, 360 Rank and File.

Metcalf House Picquet, 280 Rank and File.

Wilson, Commanding the Field Force, that in conformity with his instructions, I took Command of the Troops noted in the margin at about 10 o'clock A.M. of the 23rd ultimo, destined to attack the Enemy's Force in front of the Cashmere Gate. In order to conceal the movement of my Force from the view of the Enemy, I moved off some distance to the left, so as to cross the Ridge without being

seen from the Fort and Town.

2. Before moving with the Column, I sent instructions to Lieutenant-Colonel R. Drought, the Field Officer of the day, to collect all the Metcalfe House Picquets at the stables, and then to advance at once to his front, and after clearing the grounds of the Enemy's Skirmishers, to endeavour to take their Guns in flank and capture them.

***The Mutiny day by day.***

3. Allowing a lapse of twenty minutes, so as to enable the Picquets to get well to the front, I advanced the main Column ; a Division of Guns under Captain G. W. Money leading. On crossing the Bridge in advance of the Mound Picquet, the Detachments of H. M.'s 8th foot, under Lieutenant-Colonel Greathed, and of the 61st Foot, under Lieutenant-Colonel Deacon, were directed to move to the right and deploy, the 1st European Bengal Fusiliers and Coke's Rifles being held in reserve.

4. On this being effected, the Guns moved forward on the road in a line with the Infantry on the right. We now soon came up with the Enemy, who had their Guns in position on the road. These were immediately opened upon us, upon which our own Guns unlimbered and fired. The Infantry on the right in the meantime continued their advance, and the Enemy, fearing to be outflanked, retired after having fired but two rounds.

5. I then advanced with the Guns at a gallop, and again came up with those of the Enemy. They were now not more than 120 yards from us. It was here that the Metcalfe House Picquets, after having driven back the Enemy into an Orange Garden with a walled enclosure, rushed forward into the road.

6. As the Enemy were firing from the enclosure, I directed three Companies of the 1st Bengal European Fusiliers, under Lieutenant-Colonel T. Seaton, to move to the left, and drive the Enemy from the Orange Garden. These were supported by Major Coke with his Punjaub Rifles, and while our Guns continued firing, the Metcalfe House Picquets, composed of H. M.'s 75th Regiment that had formed up on the road, were thrown rapidly forward, in the hope of coming at once upon the Enemy's Guns. Their progress was, however, intercepted by the wall of a range of out-offices. A short delay took place in moving round this, and when the men came again to the front, the Enemy with their Guns had disappeared.

7. I was now in position opposite Ludlow Castle, beyond which I was directed not to advance, and the Enemy having escaped with their Guns and retired, I returned to Camp, having been engaged with the Enemy about two hours.

8. I have to record my satisfaction with the conduct of the Troops engaged, and to offer my thanks to the Officers Commanding the different Corps and Detachments for the manner they conducted their men during this short and rapid skirmish. To Major F. Turner, Commanding the Artillery ; to Lieutenant Colonels Greathed and Deacon, Commanding H. M.'s 8th and 61st Regiments ; to Major G. O. Jacob, Commanding 1st European Bengal Fusiliers ; Major J. Coke, Commanding 1st Punjaub Rifles, and to Lieutenant-Colonel R. Drought, Commanding the Metcalfe House Picquets ; to Lieutenant-Colonel T. Seaton also I must record my thanks, who, with his usual zeal and gallantry, accompanied the Brigade to which he is attached.

9. My thanks are also due to my Major of Brigade, Captain C. F. Simpson, and my Orderly Officer, Lieutenant F. C. Innes, of the late 60th Native Infantry, who accompanied me during the operations.

10. I beg to forward a Return of the Killed and Wounded.

No. 1423.

FROM

BRIGR. A. WILSON,  
*Commanding Field Force,*

TO

LIEUT. H. W. NORMAN,  
*Asst. Adjt. Genl. of the Army,*  
*Dated Camp before Delhi, 13th August 1857.*

Sir,

I have the honour to forward, for the information of Major-General Gowan, C.B., Commanding the Forces in the Upper Provinces, a Report by Major Reid, Commanding the Sirmoor Battalion, of the result of repeated attacks made by a large Force of the Insurgents upon his post during the night of the 1st, and continued during the greater part of the 2nd instant.

The report speaks for itself, but I cannot refrain from bringing to the notice of Major-General Gowan, with a view to the same being submitted to His Excellency the Commander-in-Chief, and through him to the Supreme Government, the admiration with which I, as well as the whole Force, have viewed the gallantry with which this noble Officer, with the gallant band under him, has held the important post entrusted to his Command.

With the aid of Her Majesty's 60th Royal Rifles, his own Regiment, the Sirmoor Battalion, assisted by Reliefs from the Guide Corps of Infantry, the 4th Seikh Regiment, and the 1st Punjaub Infantry, this Officer has, from 8th June—the date of the arrival of this Force at Delhi—sustained and defeated twenty-four separate attacks upon his position up to the 6th instant, and from that date to the present, a constant worrying attack, day and night, by both Infantry and Artillery.

I have no words to express my admiration of the endurance and gallantry displayed throughout this long period by Major

***The Mutiny day by day.***

Reid and the Officers and Men who have served under him; but I now thus briefly record my opinion of their merits, in the certain hope that Major-General Gowan, C.B., will recommend them to higher authority, for the greatest honours that can be bestowed upon them.

Appended to Major Reid's Report is a letter from him of yesterday's date, bringing to favorable notice the names of Officers who have served under him since 8th June last.

FROM

MAJOR CHARLES REID,  
*Comdg. Sirmoor Battalion.*

*Main Picquet, Hindoo Rao's House,*

*The 4th August 1857.*

Sir,

I have the honour to report, for the information of the Brigadier General Commanding the Forces, that about 4-30 P.M. on the 1st instant, I observed, from my look-out on the top of this house, that the Mutineers were turing out of the Ajmere and Toorkman Gates in considerable force. They assembled on the open plain in front of the above-mentioned Gates; but as they did not move off, I took but little notice of them beyond directing my look-out men to watch their movements. About a quarter of an hour after, on looking to my right rear, I perceived the whole of the Force which had moved out of the City on the 31st ultimo returning over the Ridge (Kala Pahar) and by the Rhotuck Road, with all the Guns they had taken out, viz. six Horse Artillery Guns, four 9-lb. Guns, and three heavy Mortars, with the whole of their Camp Equipage, and on Elephants and Camels. This Force halted about a mile from the Badgah Serai and a little before sunset was joined by the Mutineers from the City. For some little time I was doubtful as to their intentions; but as the sun went down, about five or six thousand Infantry came down with six light Guns through the Kissengunge and Pihareepoor Buildings, taking advantage of the cover as they advanced. The "Sammy House" was attacked, and here I had a hundred of Major Coke's Regiment and fifty Guides, the Picquet under Command of Captain Travers (who, I much regret to say, was mortally wounded during the night, and is since dead). I sent orders to him to encourage the Enemy to approach, and not to fire until his men were sure of their aim. Shortly after I heard a rattle of musketry from the Breast-work on the right of the "Sammy House," as also from the enclosure, and the Enemy then opened with their light Guns on the "Crow's Nest," the Breast-work, and our right flank Batteries.

It became necessary, about 7 o'clock, to send reinforcements to the "Sammy House," so I accordingly directed Lieutenant McGile, with his Company (50th Rifles) which had come up in support, to proceed to the Breast-work on the right, while I sent Captain Dely, with fifty men of the 61st Foot, to the enclosure.

Repeated attacks were made throughout the night; and at one time the Enemy came up within twenty paces of the "Sammy House" in very considerable force; but, as on all former occasions, were driven back with, I should say, very great loss; but owing to the cover they had, they were able to remove their dead without being seen. A hundred and twenty-seven bodies have, however, been since counted between the Breast-work and the Taleewallah Bazar.

A little before day-break, on the 2nd, fresh Troops were brought up, and another attack was made on the Sammy House and Breast-work, on which I directed a Company of the 60th Rifles, under the Command of Captain Sir R. Campbell, to aid in driving the Enemy back. A large Force attempted to turn the right and get round to the Subzee-Mundy; but in order to do this, they had to cross the road and the ground which has now been cleared of all jungle. As soon as they had got on the road with a body of Cavalry, which came up from the Hadgah, I ordered the Officer Commanding the Light Gun Battery to give them three rounds of grape, whilst our light Mortars played on them from the "Crow's Nest." They flew back to their cover on the left of the road immediately, and did not again show in any force.

About 10 a.m. the Enemy commenced moving off in the direction of the City; but it was not until 4 p.m. that I had the satisfaction of seeing them in full retreat with their Guns.

I cannot speak too highly of the coolness of the Troops under my Command throughout the night. There was no noise whatever, no hurry, no confusion, and my warmest thanks are due to all for their gallantry and daring.

This Report would have been furnished before; but my duties at this Picquet would not admit of it.

A Return of our loss has already been furnished.\* I am happy to say it was slight in comparison with that of the Enemy.

*Main Picquet, Hindoo Rao's House,*

*The 12th August 1857.*

Sir,

My Report of the attack on my position on the night of the 1st and morning of the 2nd in tant was a hurried affair; but I am indeed glad you have given me an opportunity of bringing to notice the names of Officers and Men who have served under me since the 8th of June last.

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\* 13 killed, 39 wounded.

***The Mutiny day by day.***

I cannot speak too highly of the conduct of the Detachments of the 60th Royal Rifles, who have on all occasions behaved admirably and ever maintained the reputation of their distinguished Corps. I would wish to bring to your notice the names of two Officers of this Regiment, *viz.* Captain Sir E. Campbell and Captain J. R. Wilton, who have at different times Commanded the parties on duty at this post, and from whom I have always received the greatest assistance.

My acknowledgments are due to Lieutenant R. H. Shebbeare, now Commanding the distinguished Corps of Guides, who has been three times slightly wounded whilst on duty with me here: also to Lieutenant Hawes, Adjutant, (likewise wounded); and other Officers doing duty with the Corps.

Detachments of the 1st Punjaub Infantry and 4th Seikhs have, since their arrival in Camp, been constantly on duty at this Piquet, and have always behaved, on all occasions of attack, with gallantry.

To Lieutenant Fisher, the Second in Command of my Regiment, and the Officers doing duty, my warmest thanks are due,—the conduct of the men you have already been pleased to make honorable mention of. It only remains for me to say that they have done their duty most cheerfully.

My thanks are also due to the Officers and Men of the 8th and 61st Foot, who have at different times taken the duties of the Subzee Muudy Picquet, which is under my orders.

I have &c.

CHAS REID.

No. 1428.

FROM

BRIGADIER-GENERAL A. WILSON,  
*Comdg. Delhi Field Force,*

To

LIEUT. H. W. NORMAN,  
*Asst. Adjt. Genl. of the Army.*

*Dated, Camp before Delhi, 12th August 1857.*

Sir,

I have the honour to report, for the information of Major-General Gowan, C.B., Commanding the Forces in the Upper Provinces, that finding the Metcalfe Picquet much annoyed by a large party of the Insurgents, who, supported by several



Guns, had established themselves in Ludlow Castle and the gardens in front of the Cashmere Gate, I resolved to make an attempt this morning to surprise them and to capture their Guns. I am happy to say the surprise was complete. The Column of Attack, joined by portions of the Metcalfe Picquet, under the able lead of Brigadier Showers, Commanding the 1st Brigade, moved down unperceived just before dawn to within a short distance of the Insurgents' Picquet, when a rush was made, and four of their Guns immediately captured.

I forward herewith Brigadier Showers' Report, with a return of killed and wounded. The latter I regret to say, is rather heavy.\*

My thanks are greatly due to Brigadier Showers, Major Coke, Commanding the left attack, and to Major Jacob, Commanding the right attack, and beg to recommend them for favourable notice. The two former Officers, I much regret, were severely wounded—Major Coke while in the act of capturing a Gun with his own hand; but I trust I shall not long be deprived of their services.

FROM

BRIGADIER ST. G. D. SHOWERS,

*Comdg. 1st Infantry Brigade,*

*Camp before Delhi, 12th August 1857.*

Sir,

I have the honor to report, for the information of Brigadier General

*Left Attack under Major Coke.*  
100 men H. M.'s 75th Regiment of the  
Metcalfe House Picquet as Skirmishers.  
100 .. 2nd European H. Fusiliers in  
support.  
250 .. 1st Punjaub Rifles Ditto.

*Right Attack under Major Jacob.*  
150 .. 1st European Bengal Fusiliers as  
skirmishers.  
200 .. In support in line, the Guide  
Cavalry moving rear.

*Centre Attack.*  
2 Horse Arty. Guns  
1 Squadron H. M.'s 9th Lancers.

*Reserve.*  
4 Horse Arty. Guns.  
100 men H. M.'s 8th Regiment.  
100 .. Kemaoon Battalion.  
100 .. 4th Sikh Infantry.

Wilson, Commanding the Field Force, that in compliance with the instructions received, I moved with a column noted in the margin at 3½ A.M., this morning. I directed the Metcalfe House Stables Picquet to move forward and sweep the gardens in advance of their position as far as the Koodsee Bagh, and to capture any Guns of the Rebels which they might find in that direction; the right attack, under Major Jacob, advancing simultaneously toward "Ludlow Castle," with similar instructions as to any ordnance they might find there. I myself took position on the road leading towards

Ludlow Castle with the Horse Artillery Guns, supported by a squadron of Her Majesty's 9th Lancers, with a force in reserve as noted in the margin.

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\* 24 killed and missing, 93 wounded.

*The Mutiny day by day.*

The arrangements having been made, the different Detachments advanced, as ordered, with the greatest steadiness, and in profound silence towards the Enemy's position, which they actually reached without the alarm being given, until at length a Sentry challenged, which was the signal for a rapid attack, commenced by a volley of Musketry on both sides, succeeded immediately by a charge with the Bayonet on our part, from which the Rebels recoiled and fled in confusion, leaving in our possession four Field

1 24-Pr. Howitzer.

2 9-Pr. Guns.

1 6-Pr. Ditto,

Guns as noted in the margin, Ammunition, Horses, &c. After capturing the Guns, I directed the Detachments of the

Kemaon Battalion in reserve, under the Command of Lieutenant G. C. Thomson (51st Native Infantry) to move into the Orange Garden on the left, and sweep down as far as the building called Koodsee Bagh, on the banks of the River. This was energetically done. It was here that I expected to find other Guns of the Rebels in position: but in this I was disappointed. The party retired.

I beg to bring to the particular notice of the Brigadier General the steadiness, silence, and order with which the 1st European Bengal Fusiliers advanced to the attack on the Enemy's Guns, which was well conceived and gallantly executed by Major Jacob and the Officers and Men of the Regiment, under his Command, and Captain S. Greville, of that Regiment, who Commanded the Skirmishers who made the first attack on the Guns.

The Horse Artillery (2 Guns). and Squadron of Her Majesty's 9th Lancers which accompanied me along the Road, had no opportunity of coming into actual contact with the Rebels; but were at times under a heavy fire and displayed the greatest steadiness.

My thanks are due to Major Coke, Commanding the left attack; to Major G. O. Jacob, Commanding the right attack; to Captain F. R. Remington, Commanding the Artillery; to Captain O. H. St. G. Anson, Commanding the Squadron, Her Majesty's 9th Lancers; to Captain W. Harris, Commanding Detachment 2nd Bengal European Fusiliers, and to Captain R. Freer (Her Majesty's 27th Regiment), Commanding the Metcalfe House Stables Picquets, and to Captain A. C. Robertson, Her Majesty's 8th Regiment; Brevet Captain Chambers, Second in Command 4th Sikh Infantry, and to Lieutenant O. C. Thomson, 51st Native Infantry, Kemaon Battalion, Commanding respectively the Detachments composing the Reserve; also to Captain C. A. Sandford, 32nd Regiment Light Cavalry, Commanding the Guide Cavalry.

My thanks are also due to Captain C. P. Simpson, my Major of Brigade, and Lieutenant F. C. Innes, 60th Regiment Native Infantry, my Orderly Officer, for the energetic assistance rendered me throughout these operations.

I regret to state that, as will be seen from the accompanying Casualty list, our loss has not been slight; but I have reason to believe, that about two hundred and fifty of the rebels (several of whom were Artillery men) were left dead on the Field in the neighbourhood of "Ludlow Castle."

After having held the ground for some time to allow of the captured Guns, &c., being removed, I was compelled by a severe wound, to retire from the scene of action leaving the retirement of the Troops to be conducted by Lieutenant-Colonel Greathed, Her Majesty's 8th Regiment.

No. 1489.

**FROM**

**MAJOR-GENERAL A. WILSON,**  
*Commanding Field Force.*

**TO**

**LIEUTENANT H. W. NORMAN,**  
*Asst. Adj. Genl. of the Army, Camp.*  
*Field Force Staff Office,*  
*Camp before Delhi, 27th August 1857.*

**Sir,**

I have the honor to forward for transmission to Major-General Gowan, C.B., Commanding in the Upper Provinces, and through him to Government, the accompanying Report of the operations of a Detachment of Irregular Cavalry I sent out under the Command of Lieutenant Hodson on the 14th instant, to watch a party of the Enemy who had moved out from Delhi on the Rhotuck road, and to afford support if necessary, either to Sonput, or our Ally, the Jheend Rajah.

Lieutenant Hodson most fully carried out my instructions to my entire satisfaction, and his Report will show that the whole of his Detachment, both Officers and Men, behaved throughout in the most gallant and effectual manner.

It must have been most gratifying to Lieutenant Hodson, to find his new Regiment so steady and staunch in their first engagement with the Enemy.

I particularly request, that Major-General Gowan will bring to the notice of Government the ready and loyal conduct on this occasion of the Jheend Rajah and the good service performed by his Troops. I have already, through Colonel



dars of the village, and defended themselves desperately. They were eventually overpowered and destroyed, but not without considerable difficulty and several casualties on our side. Lieutenant H. Gough and seven men being wounded. I subsequently caused those of the captured—who who were proved on enquiry to have been in the Service of Government and to have joined the Rebels—to be executed.

5. During the afternoon of the 15th, the Enemy broke up from Sampah and marched to Rhotuck, where they gave out that they were going to remain for two or three days. I marched after them on the morning of the 16th towards Rhotuck by Sassaneh, Humaioonpur, and Balout. On reaching Bohur—five miles short of Rhotuck—I ascertained that the Rebels had suddenly marched in the morning towards Medinah on hearing of our movements. I therefore halted for the day, the rain being very heavy.

6. On the morning of the 17th we moved on Rhotuck. On approaching the Towu and riding on to reconnoitre with a small party, I found a large body of armed men drawn up at the Old Fort, in front of the place, accompanied by a few Sowars. They immediately opened fire on us, and as we withdrew to bring up the Detachment, followed us up the road, firing and yelling in derision.

The instant the head of the Column arrived, they were charged, dispersed and driven into the Towu, leaving thirteen of their number dead. They subsequently turned out to be Rangurs, Kasals and other turbulent inhabitants of the Town, headed by Babur Khan, the Chief of the Rangurs.

7. After riding round Rhotuck and reconnoitring the surrounding country and the approaches to it, I encamped in the open space in rear of the Kutcherry Buildings at the junction of the road by which we had marched from Bohur with the main road to Delhi. Some of the Zemindars and Hindoos of Rhotuck came out to me immediately afterwards, and through their instrumentality, the Detachment was amply provided with all necessary supplies. No further attempt was made to annoy us.

8. At about 7 o'clock the next morning, I received information that Babur Khan had gone during the night to the Camp of the Rebels on the Bansee Road and brought back 300 Rangur Horsemen belonging to different Irregular Cavalry Regiments, to assist him in an attack upon us. Three or four minutes afterwards, a large body of Horsemen dashed up the roads from the Town at speed, followed by a mass of Footmen, armed with swords and matchlocks, certainly not less than 900 or 1000 in number. At the moment of the attack, a party of 25 Jheend Horsemen, who had come from Gohana, on hearing from me of our approach, were crossing the road towards our Camp, and found themselves charged by and intermixed with the Enemy's horse.

***The Mutiny day by day.***

Dunsford, Commanding the Rajah's Troops, expressed my acknowledgements to the Rajah for the ready assistance he afforded upon this occasion, and from the commencement of our operations before Delhi; and also my satisfaction at the favorable report made by Lieutenant Hodson of the gallantry of his men.

FROM

LIEUTENANT W. R. S. HODSON,  
*Commanding Irregular Horse,*

*Camp Delhi 24th August 1857.*

Sir,

I have the honour to report the proceedings of the Cavalry Detach-		ment* which left Camp under my Command on the night of the 14th and 15th instant, under verbal instructions from Major-General Wilson, Commanding the Field Force.
*European Officers ..	6	
Guide Cavalry ..	103 sabres.	
Hodson's Irregular Horse ..	233 ..	
Jheend Horse ..	25 ..	
Total ..	361 ..	

2. My instructions were to watch a party of the Enemy who had moved out from Delhi by the Nujufgurh road with the avowed purpose of threatening our communications with Soneput and the Grand Trunk Road, or of marching to attack Hansee and the Rajah of Jheend, to ascertain their precise object and direction, and to afford support to either Soneput or the Jheend Rajah as might be necessary. I was also to examine the state of the roads and country, with a view to the probable necessity of a larger Force taking the Field.

3. On reaching Boanuh, by way of Azadpoor and the Canal bank, I ascertained that the Enemy had passed the 14th at Sampleh, and were said to be moving towards Rhotuck. I therefore pushed on to Khurkowdeh, on the road from Boanuh to that town, reaching it about noon on the 15th.

4. Having been informed that a number of Irregular Cavalry men—whose homes were in the village—had arrived the day before from Delhi at Khurkowdeh, I took measures for securing the several entrances to it, and attempting their capture, sending a small party of the Guide Corps to surprise and arrest the leading man, named Besharut Ali, a Ressallar of the 1st Irregular Cavalry. Both objects were accomplished, only two Sowars having had time to effect their escape before the village was surrounded. I then entered the village with a party of dismounted Sowars. From information received from the villagers, I was able to seize several of the Mutineer Sowars before they had time to arm. A large party, however, took refuge in the upper-story of a house belonging to one of the Lumber-

dars of the village, and defended themselves desperately. They were eventually overpowered and destroyed, but not without considerable difficulty and several casualties on our side, Lieutenant H. Gough and seven men being wounded. I subsequently caused those of the captured—who who were proved on enquiry to have been in the Service of Government and to have joined the Rebels—to be executed.

5. During the afternoon of the 15th, the Enemy broke up from Samplah and marched to Rhotuck, where they gave out that they were going to remain for two or three days. I marched after them on the morning of the 16th towards Rhotuck by Sassaneh, Humaionpur, and Balout. On reaching Bohur—five miles short of Rhotuck—I ascertained that the Rebels had suddenly marched in the morning towards Medinah on hearing of our movements. I therefore halted for the day, the rain being very heavy.

6. On the morning of the 17th we moved on Rhotuck. On approaching the Towu and riding on to reconnoitre with a small party, I found a large body of armed men drawn up at the Old Fort, in front of the place, accompanied by a few Sowas. They immediately opened fire on us, and as we withdrew to bring up the Detachment, followed us up the road, firing and yelling in derision.

The instant the head of the Column arrived, they were charged, dispersed and driven into the Towu, leaving thirteen of their number dead. They subsequently turned out to be Rangurs, Kasals and other turbulent inhabitants of the Town, headed by Babur Khan, the Chief of the Rangurs.

7. After riding round Rhotuck and reconnoitring the surrounding country and the approaches to it, I encamped in the open space in rear of the Kutcherry Buildings at the junction of the road by which we had marched from Bohur with the main road to Delhi. Some of the Zemindars and Hindoos of Rhotuck came out to me immediately afterwards, and through their instrumentality, the Detachment was amply provided with all necessary supplies. No further attempt was made to annoy us.

8. At about 7 o'clock the next morning, I received information that Babur Khan had gone during the night to the Camp of the Rebels on the Bansee Road and brought back 300 Rangur Horsemen belonging to different Irregular Cavalry Regiments, to assist him in an attack upon us. Three or four minutes afterwards, a large body of Horsemen dashed up the roads from the Town at speed, followed by a mass of Footmen, armed with swords and matchlocks, certainly not less than 900 or 1000 in number. At the moment of the attack, a party of 25 Jheend Horsemen, who had come from Gohana, on hearing from me of our approach, were crossing the road towards our Camp, and found themselves charged by and intermixed with the Enemy's horse.

## ***The Mutiny day by day.***

They defended themselves with their carbines, and this checked the attacking party, two of their number being wounded. The whole of the horses of the Detachment having been kept saddled, no time was lost in turning out, and the instant the twenty leading men were on their horses, the Enemy was charged and driven back in confusion towards the Town, their flight being covered by the matchlock-men, who had occupied some buildings and compounds between the Kutcherry and the Town. Directly the whole of the Detachment was ready and formed up I sent what little followers and baggage we had to the rear under a sufficient escort, and prepared for a further attack. I formed the main body on the road in three lines, the Guides in front, sending a Troop out to the right front under Lieutenant, Wise, and one to the left under Lieutenant McDowell, ready to take the Enemy in flank, should they again charge up the roads (of which there are three leading from the Town to our position). These movements were covered by Skirmishers, and by the excellent fire of the Jheend Horsemen armed with matchlocks, whom I desired to dismount and drive back by their fire any party of the Enemy who might come from under shelter of the buildings. This service they performed exceedingly well and most cheerfully.

9. Finding that our Ammunition was nearly exhausted after some little time had elapsed, and that there appeared little chance of the Enemy coming from their cover to attack us again, I determined to draw them out into the open country behind our position, and endeavour to bring on a fight there. Everything turned out as I had anticipated. My men withdrew slowly and deliberately by alternate Troops (the Troop nearest the Enemy by alternate ranks) along the line of the Bohur Road, by which we had reached Rhotuck, our left extending towards the main road to Delhi. The Jheend Horsemen protected our right, and a Troop of my own Regiment the left. The Enemy moved out the instant we withdrew, following us in great numbers, yelling and shouting and keeping up a heavy fire of matchlocks.

Their Horsemen were principally on their right, and a party galloping up the main road, threatened our left flank. I continued to retire until we got into open and comparatively dry ground, and then turned and charged the mass who had come to within from one hundred and fifty to two hundred yards of us.

The Guides, who were nearest to them, were upon them in an instant, closely followed by and soon intermixed with my own men.

The Enemy stood for a few seconds, turned, and then were driven back in utter confusion to the very walls of the Town, it being with some difficulty that the Officers could prevent their men entering the Town with the fugitives. Fifty of the Enemy—all Horsemen—were killed on the ground, and many must have been wounded.



10. Nothing could be better than the conduct of all concerned. The Guide Cavalry behaved with their usual dashing gallantry, and their example was well emulated by the men of my new Regiment, now for the first time engaged with an Enemy. They not only remained under fire unflinchingly, but retired before the Enemy steadily and deliberately, and when ordered, turned and charged home boldly. It would have been hopeless to expect this, but for the magnificent leading and admirable management of the Officers in Command of the several Troops—Captain Ward and Lieutenants McDowell, Wise, C. J. Gough and H. Gough. The difficulty of their task will be appreciated when it is remembered that, with the exception of the Guides, none of the party had been drilled or formed or knew anything of Field movements.

11. After their defeat, as I subsequently ascertained, the Rangur Horsemen evacuated the place the same evening, carrying away their wounded with them. The whole of the Rangurs and Kussaies of the Town also fled during the night for refuge to the neighbouring villages. As soon as I had re-assembled the Detachment on our original ground, and ascertained personally that no parties of the Enemy remained outside Rhotuck, I moved round by our right to the Northern side of the Town on to the Gohana road, and encamped at Jussea—the first village sufficiently large to furnish us with supplies. I was in direct communication with Jheend, twenty-two coss distant, and with Gohana, where a body of the Rajah's Troops are stationed, and by way of Ghyloré my communication with Camp by way of Khurkowdeh and with Soneput was perfectly secure. I was also prepared to move off to the right towards Hansee to General Coitlandt, should he attack the Rebel Force moving in that direction. This Force had moved off from Medinaha to Mehum on our reaching Rhotuck, and thence to Mondahal, and on the 18th evacuated the Rhotuck District and marched to Barsee, five coss from Hansee, in considerably diminished numbers.

12. On the 19th I halted at Jussea, receiving, at day-break, a valuable reinforcement in the shape of eighty well-equipped Horsemen from Jheend, with the promise of Infantry and a Gun if I required them. They had already been sent off by the Rajah with his usual ever-ready zeal, and would have been available in a few hours. On the evening of the 19th, I received the Major-General's orders to return towards Camp, and marched the next day to Khurkowdeh, and on the 21st, by a circuitous route, to Soneput.

13. I cannot close this without testifying to the excellent conduct of the Jheend Horsemen throughout the whole of our proceedings. Nothing could have been better than the behaviour, from first to last, both in keeping up our communications, in enduring fatigue and bad weather, and in gallantry in action. This is not the first time I have had experience of the good service they have rendered. At the action of Badlee-Serai, on the 8th of June, they particularly distinguished themselves, and they did no

***The Mutiny day by day.***

less well on the present occasion. I trust the Major-General will be pleased to convey his acknowledgments of their conduct to the Rajah.

14. A list of casualties is enclosed.\*

No. 1495.

FROM

MAJOR-GENERAL A. WILSON,  
*Commanding Field Force,*

TO

CAPTAIN NORMAN,  
*Asst. Adjt. General of the Army.*

*Camp before Delhi, the 30th August 1857.*

Sir,

I have the honor to report, for the information of Major-General Gowan, C.B., Commanding the Force in Upper India and for submission to Government, that learning that a large force of Rebels had moved out of the City in the direction of Nujufghur for the purpose of attacking us in the rear, cutting off our supplies, and capturing the Siege Train now *en route* from Ferozepore, I detached a Column, under Brigadier-General Nicholson, on the morning of the 25th instant, to intercept them.

I enclose herewith the Brigadier General's Report of his operations, with Plans of the route pursued by the Column, and of the action of Nujufghur, with Return of the Killed and Wounded, and Ammunition expended, as well as of the captured Ordnance and Ammunition. I also enclose copy of a Field Force Order I have issued on the occasion.

To Brigadier General Nicholson's judgment, energy and determination I attribute mainly the glorious result of the expedition, and next to the steadiness and gallantry in action, and the cheerfulness under great privation and fatigue exhibited by the Officers and Men placed under his Command.

\*14 Wounded.

They all most richly deserve my highest praise, and in forwarding this Report for submission to Government, I beg that Major-General Gowan will bring to the favourable notice of Government the name of Brigadier General J. Nicholson, as well as all those Officers mentioned in his Report as those to whom he was most indebted on this occasion.

No. 1088.

EXTRACT FIELD FORCE ORDERS, BY MAJOR-GENERAL

A. WILSON, COMMANDING.

*Head Quarters Camp, Delhi, 30th August 1857.*

Major-General Wilson, Commanding the Force, begs to offer his most hearty thanks and congratulations to Brigadier General Nicholson and the Force which moved from Camp, under his Command, on the morning of the 25th instant, on the very successful issue of the operations they were engaged in. This Force made a march of 18 miles over a country intersected with swamps, at the end of which they fought an action with the Enemy, variously estimated at 4,000 to 6,000 men; gained a complete victory, capturing all the Enemy's Guns (13 in number); and owing to the difficulty in getting up the baggage and provisions, had to bivouac on the ground, without food or covering of any kind. The next day the Troops marched back, arriving in Camp that same evening.

2. The Major-General considers he is indebted for the glorious result of these operations to the judgment and energy displayed by Brigadier General Nicholson; the steadiness and gallantry of the Troops in action, and the cheerfulness with which they bore the fatigue and hardships they were called upon to undergo.

3. The Major-General has much pleasure in publishing the following extract\* from Brigadier-General Nicholson's Report, and in assuring all therein mentioned, that he will bring them to favourable notice in his Report to the Commander of the Forces in the Upper Provinces for submission to Government.

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\*Not printed, as the report is given in full.

***The Mutiny day by day.***

To

MAJOR R. S. EWART,  
*Depty. Asst. Adj. Gen., Field Force,*

*Camp, 4th Infantry Brigade, before Delhi,  
 the 28th August 1857.*

Sir,

I have the honour to report, for the information of Major-General Wilson, Commanding before Delhi, that agreeably to his orders I marched

1 Squadron H. M.'s 9th Lancers.  
 16 Guns Horse Artillery.  
 120 Guide Cavalry.  
 80 2nd Punjaub Cavalry.  
 Wing, H. M.'s 61st Regiment,  
 420 Bayonets.  
 1st European Bengal Fusiliers,  
 380 Bayonets.  
 1st Punjaub Infantry,  
 400 Bayonets.  
 2nd Punjaub Infantry,  
 400 Bayonets.  
 Detachment of Sappers and  
 Miners, 30.  
 200 Mooltanee Horse.

from this at daybreak on the 25th, with the Troops noted in the margin, to intercept a force of the Enemy said to be moving from Delhi to Bahadoorgurh, with the intention of attacking us in rear.

On my arrival at the village of Nanglooece—about 9 miles from this, (and to reach which I had to cross two difficult swamps), I learned that the Enemy had been at Palam the previous day, and would probably reach Nujf-gurh in the course of the afternoon; I therefore decided on leaving the Bahadoorgurh road, and if possible coming up with and routing the

Enemy at Nujf-gurh before nightfall.

I crossed a tolerably deep and broad ford over a branch of the Nujf-gurh Jheel, near the village of Bassroula, at about 4 p.m., and found the Enemy in position on my left and front, extending from the Bridge over the Nujf-gurh Canal to the Town of Nujf-gurh itself—a distance of a mile and three-quarters, or two miles. Their strongest point was an old Serai on their left centre, in which they had four Guns: nine more Guns were between this and the Bridge.

It was 5 o'clock before the Troops were across the ford and parallel with the position. As the evening was so far advanced, and I had no Guides, I labored under the disadvantage of being compelled to make a very hasty reconnaissance.

The plan which I determined on was to force the left centre (which, as I have said, was the strongest part of the position), and then changing front to the left, to sweep down their line of Guns towards the Bridge.

I accordingly formed up H. M.'s 61st Regiment, the 1st European Fusiliers, and the 2nd Punjaub Infantry (with the exception of 100 men of each Corps, whom I had told off on the march as a Rear Guard and a Reserve), with four Guns on the right and ten on the left, supported by the Squadrons of 9th Lancers and Guide Cavalry; and after the Artillery had fired a few rounds, I advanced and charged with the Infantry.

The Enemy was driven out with scarcely any numerical loss to us (though H. M.'s 61st had a most gallant and promising Officer, Lieutenant,

Gabbott, mortally wounded), and I then changed front to the left, and so turned the whole position in which their Guns were. The Enemy made little resistance as we advanced, and were soon in full retreat across the Bridge, with our Guns playing upon them, thirteen of their Field Pieces having fallen into our hands.

At the same time that I attacked the Serai, I directed Lieutenant Lumsden, Officiating Commandant of Major Coke's Corps, the 1st Punjaub Infantry, to advance and clear the town of Nujufgurb on our right. This service was well performed by Lieutenant Lumsden, who, after passing through the town, brought his right shoulder forward and followed in rear of the main line.

The Enemy's Guns were now all in our possession, and I supposed the conflict at an end, when it was reported to me that a few men had concealed themselves in the little village of Nules, which was at this time a few hundred yards in rear of our line. I immediately sent orders to Lieutenant Lumsden, who was then nearly abreast of the village, to drive them out; but though few in number, they had remained so long that our troops were on all sides of them; and seeing no line of retreat open, they fought with extreme desperation.

Lieutenant Lumsden was, I regret to say, killed with eleven of his men, twenty-six more were wounded, and I was obliged to send back the 61st Regiment to reinforce the Punjaub Infantry. This Corps also suffered a loss of another gallant officer, Lieutenant Hixington, dangerously wounded, and five men killed and several more were wounded, before the village was in our possession.

The Enemy's Cavalry, apparently not less than 1,000 strong, more than once made a show of charging during the action, but were on each occasion driven back by the fire of our Artillery. Our own Cavalry I regretted much my inability to employ against them, but I had been obliged to leave the Squadron 2nd Punjaub Cavalry under Lieutenant Nicholson and 120 of the Mooltaneees to look after the baggage, and I had of Lancers, Guides and Mooltaneees not more than 300 left to escort the Guns and form a Reserve.

I passed the night at the Bridge with the 1st Fusiliers and 2nd Punjaub Infantry and a Detachment of Artillery and Lancers, I had the Bridge mined and blown up by the Sappers, and all the Waggons and Tumbrils which I had not the means of bringing away were also blown up by Major Tombs. Shortly after day-break I started on my return to Camp, and fearing that more rain should render the ground (already sufficiently difficult) quite impracticable, I brought the Column in the same evening.

It now only remains for me to fulfil the pleasing duty of expressing my extreme satisfaction with the conduct of the troops in these operations. No soldiers ever advanced to the attack of a position with greater gallantry and steadiness than H. M.'s 61st Regiment, the 1st Fusiliers, and the 2nd Punjaub Infantry. No Infantry was ever more ably assisted by Artillery. Major Coke's Regiment under its gallant and lamented Officiating Commandant, Lieutenant Lumsden, sustained its high reputation.

### ***The Mutiny day by day.***

The Troops are likewise entitled to great credit for the cheerfulness with which they bore the hardships they were exposed to; they marched at day-break, and had to cross two difficult swamps before their arrival at Nauglooe; and as it would not have been prudent to take the Baggage across the ford at Baprowia, they were obliged, after fourteen hours' marching and fighting, to bivouac on the Field without food or covering of any kind.

The Officers to whom I am most indebted for their services on this occasion, and whom I would beg to bring prominently to the favourable notice of the Major General, are Major Tomba, Commanding the Artillery, (this Officer's Merits are so well known to the Major-General that it is unnecessary for me to dwell upon them); Major Jacob, Commanding 1st Fusiliers; Captain Green, Commanding 2nd Punjab Infantry, and Captains Remington and Blunt and Lieutenants Wilson and Sankey of the Artillery. I also received every assistance from my Staff and Orderly Officers, Captain Blane, H. M.'s 52nd, my Brigade Major, Captain Shute, Deputy Assistant Quarter Master General; Captain Trench, 35th Native Infantry, and Lieutenant Dixon, late 9th Light Cavalry, my Orderly Officers, and Lieutenant R. C. Low, on the staff of the Major General Commanding.

Lieutenant Sarell, H. M.'s 9th Lancers, to whom I entrusted the Command of the Cavalry with the Guns during the action, and of the Rear Guard on the 26th performed these duties very much to my satisfaction. The same remarks apply to Captain Gordon, H. M.'s 61st, who Commanded the Reserve during the action and night of the 25th.

Sir Theophilus Metcalfe was good enough to accompany and give me the benefit of his local knowledge; he was also present and very forward in the attack on the Serai.

Lieutenant Geneste, of the Engineers, deserves credit for the very complete and successful manner in which he blew up the Bridge.

I enclose a Return of captured Guns and Ordnance Stores, a Casualty Roll\* and a Sketch of the Ground prepared by Captain Shute, of the Quarter Master General's Department.

I have &c.,  
J. NICHOLSON, *Brigdr. Genl.*  
*Comdg. 4th Infantry Brigade.*

*Notification No. 1237 in a Gazette Extraordinary of the 2nd  
October 1857 runs as follows:—*

The Right Hon'ble the Governor-General in Council has received, by a Telegraphic Message, the gratifying announcement that Delhi is entirely in the hands of Major-General Wilson's Army.

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•25 killed, 70 wounded.

Delhi, the focus of the treason and revolt which for four months have harassed Hindostan, and the stronghold in which the Mutinous Army of Bengal has sought to concentrate its power, has been wrested from the Rebels. The King is a Prisoner in the Palace. The Head-Quarters of Major General Wilson are established in the Dewan Khas. A strong Column is in pursuit of the fugitives. Whatever may be the motives and passions by which the Mutinous Soldiery, and those who are leagued with them, have been instigated to faithlessness, rebellion, and crimes at which the heart sickens, it is certain that they have found encouragement in the delusive belief that India was weakly guarded by England, and that before the Government could gather together its strength against them their ends would be gained. They are now undeceived. Before a single soldier of the many thousands who are hastening from England to uphold the supremacy of the British Power has set foot on these shores, the Rebel Force, where it was strongest and most united, and where it had the command of unbounded Military appliances, has been destroyed or scattered by an Army collected within the limits of the North-Western Provinces and the Punjab alone. The work has been done before the support of those Battalions which have been collected in Bengal from the Forces of the Queen in China and in Her Majesty's Eastern Colonies could reach Major-General Wilson's Army ; and it is not by the courage and endurance of that gallant Army alone ; by the skill, sound judgment, and steady resolution of its brave Commander ; and by the aid of some Native Chiefs true to their allegiance that, under the blessing of God, the head of the rebellion has been crushed, and the cause of loyalty, and rightful authority vindicated.

The Governor-General in Council hopes that the receipt of despatches from Major-General Wilson will soon place it in his power to make known the details of the operations against Delhi, and to record, fully and publicly, the thanks and commendation which are due to the officers and men by whose

***The Mutiny day by day.***

guidance, courage and exertions those operations have been brought to a successful issue.

But the Governor-General in Council will not postpone, till then, his grateful acknowledgment of the services which have been rendered to the Empire, at this juncture, by the Chief Commissioner of the Punjab.

To Sir John Lawrence, K. C. B., it is owing that the Army before Delhi, long ago cut off from all direct support from the Lower Provinces, has been constantly reunited and strengthened so effectually as to enable its Commander not only to hold his position unshaken, but to achieve complete success.

To Sir John Lawrence's unceasing vigilance, and to his energetic and judicious employment of the trustworthy forces at his own disposal, it is due that Major-General Wilson's Army has not been harassed or threatened on the side of the Punjab, and that the authority of the Government in the Punjab has been sustained and generally respected.

The Governor-General in Council seizes, with pleasure, the earliest opportunity of testifying his high appreciation of these great and timely services.

**GENERAL ORDERS.**

BY

**HIS EXCELLENCY THE COMMANDER IN CHIEF,***Head Quarters, Calcutta, 13th October 1857.***BY THE RIGHT HONORABLE THE GOVERNOR GENERAL OF  
INDIA IN COUNCIL.***Fort William, 8th October 1857.*

No. 1257 of 1857.—The Right Honorable the Governor General in Council has the great satisfaction of publishing the subjoined letter of this day's date, from His Excellency the Commander



in Chief, accompanied by letters from the General in command and from the Adjutant General of the Army at Delhi.

I will be seen that further and more complete reports from Major General Wilson are yet to follow.

Most cordially does the Governor General join in the high encomium passed upon Major General Wilson and his brave troops by General Sir Colin Campbell ; from whom praise so hearty and so just will not fail to be appreciated by every Soldier, British or Native, in the Army of the North-West.

The noble qualities which that Army has evinced during the arduous and wearing struggle of the last three months, are indeed worthy of the highest admiration and praise. Its steady perseverance and eager, resistless courage have gloriously upheld the authority, and will not disappoint the expectations of England.

By order of the Right Honorable the Governor General of India in Council.

COUNCIL CHAMBER, } R. J. H. BIRCH, *Colonel,*  
*Fort William, 8th October 1857.* } *Secretary to the Govt. of*  
*India, Mily Dept.*

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*Government House, Calcutta, 8th October 1857.*

To

COLONEL BIRCH, C. B.,  
*Secretary to Government,*  
*Military Department.*

Sir,

I have the honor to forward, for submission to His Lordship the Governor General in Council, two despatches which have arrived from Major General Wilson, Commanding the field force before Delhi, and the Adjutant General of the Army.

I beg very particularly to call the attention of His Lordship to the matter contained in these two Communications,

***The Mutiny day by day.***

and to give expression to the very cordial feeling I experience towards Major General Wilson and the force under his command.

It is impossible to be too lavish of praise for the untiring energy, invincible fortitude, and splendid gallantry by which this force has been distinguished, from the General in command to the Private Soldier in the ranks.

All have done their duty most nobly; and the steadfast courage of the men has enabled the General to carry out his enterprize, in spite of scanty means and a deadly season.

I have the honor to be,

SIR,

Your very obedient, humble servant.

C. CAMPBELL, *General.*

*Commander in Chief.*

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*Head Quarters. Field Force, Delhi, 16th September 1857.*

To

CAPTAIN H. W. NORMAN,

*Assistant Adjutant General of the Army.*

Sir,

I have the high satisfaction of reporting, for the information of the Major General Commanding in the Upper Provinces, and through him of His Excellency the Commander in Chief and of Government, that on the morning of the 14th instant the Force under my Command successfully assaulted the City of Delhi.

Under present circumstances, Major General Gowan will, I trust, allow me to withhold for a time a full and complete detail of the operations from their commencement to their close, and to limit it myself to a summary of events.

After six days of open trenches, during which the Artillery and Engineers, under their respective Commanding

Officers, Major Gaitskell and Lieutenant-Colonel Baird Smith, vied with each other in pressing forward the work, two excellent and most practicable breaches were formed in the walls of the place, one in the curtain to the right of the Cashmere Bastion, the other to the left of the Water Bastion; the defences of the bastions and the parapets, giving musketry cover to the Enemy commanding the breaches, having also been destroyed by the Artillery.

The assault was delivered on four points. The 1st Column, under Brigadier General J. Nicholson, consisting of Her Majesty's 75th Regiment (300 men), the 1st European Bengal Fusiliers (200 men), and the 2nd Punjaub Infantry (450 men), assaulted the main breach; their advance being admirably covered by the 1st Battalion Her Majesty's 60th Rifles, under Colonel J. Jones. The operation was crowned with brilliant success; the Enemy, after severe resistance, being driven from the Cashmere Bastion, the Main Guard, and its vicinity, in complete rout.

The 2nd Column, under Brigadier Jones, of Her Majesty's 61st Regiment, consisting of Her Majesty's 8th Regiment (250 men), the 2nd European Bengal Fusiliers (250 men) and the 4th Regiment of Seikhs (350 men), similarly covered by the 60th Rifles, advanced on the Water Bastion, carried the breach, and drove the Enemy from his Guns and position, with a determination and spirit which gave me the highest satisfaction.

The 3rd Column, under Colonel Campbell, of Her Majesty's 52nd Light Infantry, consisting of 200 of his own Regiment, the Kemaon Battalion (250 men), and the 1st Punjaub Infantry (500 men), was directed against the Cashmere Gateway. This Column was preceded by an Explosion Party, under Lieutenants Home and Salkeld, of the Engineers, covered by the 60th Rifles. The demolition of the Gate having been accomplished, the Column forced an entrance, overcoming a strenuous opposition from the Enemy's Infantry and heavy Artillery, which

had been brought to bear on the position. I cannot express too warmly my admiration of the gallantry of all concerned in this difficult operation.

The Reserve, under Brigadier Longfield, Her Majesty's 8th Regiment, composed of Her Majesty's 61st Regiment (250 men), the 4th Punjaub Rifles (450 men), the Belooch Battalion (300 men), the Jheend Rajah's Auxiliaries (300 men), and 200 of Her Majesty's 60th Rifles, who joined after the assault had been made, awaited the result of the attack, and on the Columns entering the place, took possession of the posts I had previously assigned to it. This duty was ultimately performed to my entire satisfaction.

The firm establishment of the Reserve rendering the assaulting Columns free to act in advance, Brigadier General Nicholson, supported by Brigadier Jones, swept the ramparts of the place from the Cashmere to the Cabul Gates, occupying the Bastions and defences, capturing the Guns, and driving the Enemy before him.

During the advance, Brigadier General Nicholson was, to the grief of myself and the whole Army, dangerously wounded. The Command consequently devolved on Brigadier Jones, who, finding the Enemy in great force, occupying and pouring a destructive fire from the roofs of strong and commanding houses in the City, on all sides, the ramparts themselves being enfiladed by Guns, prudently resolved on retaining possession of the Cabul Gate, which his Troops had so gallantly won, in which he firmly established himself, awaiting the results of the other Columns of Occupation.

Colonel Campbell with the Column under his Command advanced successfully by one of the main streets beyond the "Chandnee Chouk", the central and principal street of the City, towards the Jumma Musjid, with the intention of occupying that important post. The opposition, however, which he met from the great concentration of the Enemy at the Jumma Musjid and the houses in the neighbourhood, he

himself, I regret to say, being wounded, satisfied him that his most prudent course was not to maintain so advanced a position with the comparatively limited Force at his disposal, and he accordingly withdrew the head of his Column and placed himself in communication with the Reserve, a measure which had my entire approval ; I having previously determined that, in the event of serious opposition being encountered in the Town itself, it would be most inexpedient to commit my small Force to a succession of street fights, in which their gallantry, discipline, and organisation, could avail them so little.

My present position, therefore, is that which, under such a contingency, I had resolved to occupy and establish myself in firmly, as the base of any systematic operations for the complete possession of the City. This embraces the Magazine on one side, and the Cabul Gate on the other, with the Moree, Cashmere, and Water Bastions, and strong intermediate posts, with secure communications along the front and to the rear.

From this base I am now cautiously pressing the Enemy on all points, with a view to establishing myself in a second advanced position ; and I trust before many days to have it in my power to announce to the Supreme Government, that the Enemy have been driven from their last stronghold in the Palace, Fort and Streets of the City of Delhi.

Simultaneously with the operations above detailed, an attack was made on the Enemy's strong position outside the City, in the suburbs of Kissengunge and Pahareepore, with a view of driving in the Rebels, and supporting the main attack by effecting an entrance at the Cabul Gate after it should be taken.

The Force employed on this difficult duty, I entrusted to that admirable Officer, Major C. Reid, Commanding the Sirmoor Battalion, whose distinguished conduct I have already had occasion to bring prominently to the notice of superior authority, and who was, I much regret, severely wounded on

***The Mutiny day by day.***

this occasion. His Column consisted of his own Battalion, the Guides, and the men on duty at Hindoo Rao's (the Main Picquet), numbering in all about 1000, supported by the Auxiliary troops of His Highness the Maharajah Rumber Singh, under Captain R. Lawrence.

The strength of the positions, however, and the desperate resistance offered by the Enemy, withstood for a time the efforts of our Troops, gallant though they were, and the combination was unable to be effected. The delay, I am happy to say, has been only temporary, for the Enemy have subsequently abandoned their positions, leaving their Guns in our hands.

In this attack I found it necessary to support Major Reid with Cavalry and Horse Artillery, both of which arms were admirably handled, respectively, by Brigadier Hope Grant, of Her Majesty's 9th Lancers, Commanding the Cavalry Brigade, and Major H. Tombs, of the Horse Artillery, though I regret their own loss was very heavy.

The resistance of the Rebels up to this time has been that of desperate men, and to this must be attributed the severe loss we have sustained, amounting, proximately, so far as I am able to judge, in the absence of casualty Returns, to 46 Officers killed and wounded, and about 800 men. Amongst those of whose services the State has been deprived, are many Officers of distinction and merit, holding superior Commands, whose places cannot be supplied; and I have specially to lament the loss which has been sustained by that splendid Corps, the Engineers, nine Officers of that arm having fallen in the gallant performance of their duty.

Until I am in possession of reports from Brigadiers and other Commanding Officers, I shall be unable to enter more fully into the details of these operations, and I trust the circumstances under which I write will excuse any slight inaccuracies or imperfections which my Despatch may exhibit.

The absence of such reports also prevents my bringing to notice the names of those Officers and men who have

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specially distinguished themselves. This will be my grateful duty hereafter. But I cannot defer the expression of my admiration for the intrepidity, coolness and determination of all engaged, Europeans and Natives, of all arms of the Service.

I have etc.,

A. WILSON, *Major General,*  
*Commanding Field Force.*

*City of Delhi 18th September 1857.*

FROM

THE ADJUTANT GENERAL OF THE ARMY,

TO

THE OFFICER COMMANDING AT CAWNPORE.

Sir,

On the afternoon of the 14th I despatched a messenger to you, intimating the success of the assault on Delhi, which took place that morning, and that we held from the Cabul Gate to the College; since then we have pushed on, and now occupy from the Cabul Gate along the line of the Canal, with our left holding the Bank, which opens on the Chandnee Chouk. The Magazine was breached during the 15th, and taken by assault at day-break on the 16th. You will understand from this that the Mutineers occupy the Burn Bastion, and all that portion of the City to its south, excepting the Bank; they also still occupy the Palace and Selingurh, and have a Camp pitched outside near the Ajmere Gate. The Palace wall will be breached as soon as we obtain a suitable site for our battery, which we have not yet acquired. Our Mortars have been brought into the Town and are shelling the Palace. The Guns taken on the works have also been turned upon the portions of the Town which are in possession of the Mutineers, and we are gradually pressing forwards. The usual license which invariably accompanies an assault of a large city is somewhat retarding our advance, but order is fast being restored. At first the Mutineers offered obstinate resistance, but they have become less active. The townspeople are flying the city in

***The Mutiny day by day.***

crowds, and the Mutineers themselves are deserting in large bodies; their Cavalry it is reported having almost entirely disappeared. We can get no good information as to the Mutineers' line of retreat, but some say Gwalior. Few pass over the Bridge. Their positions at Kissengunge were abandoned on the day after the assault, seven Guns being left behind in position. Our casualties on the day of the assault were:—Europeans—killed, 8 Officers, 162 rank and file; wounded, 52 Officers, 510 rank and file. Natives—killed, 103; wounded 310. Missing, 10 Europeans. Total Europeans and Natives, killed and wounded, 1145. The following Officers killed:—Engineers, Lieutenant Tandy; H. M.'s 75th, Lieutenant Fitzgerald; H. M.'s 52d, Lieutenant Bradshaw; H. M.'s 8th, Lieutenant Webb; 1st Fusiliers, Major Jacob, Captain McBarnet, 55th Native Infantry, doing duty; Lieutenant Davidson, 26th Native Infantry, doing duty with 2d Punjaub Infantry; Lieutenant Murray, 42d Native Infantry, doing duty with Guides. Wounded—Artillery, Major Tombs, Lieutenant Lindsay; Engineers, Lieutenants Greathed, Maunsell, Medley, Salkeld (dangerously), Chesney, Brownlow (dangerously), Hovenden, Pemberton; local Ensign Gustavinske; 6th Dragoons, Captain Rosser (mortally); 84th Foot (doing duty with 9th Lancers), Captain the Honorable A. Anson; Lieutenant B. Cuppage, 6th Light Cavalry, doing duty with 9th Lancers; H. M.'s 75th Foot, Colonel Herbert; Lieutenants Armstrong, Watson, Dayrell, 58th Native infantry (doing duty); 2d Fusiliers, Captain Hay, 60th Native Infantry (doing duty) dangerously; Lieutenant Elderton, Lieutenant Gambier, 38th Native Infantry (doing duty) dangerously; Lieutenant Walker, 60th Native Infantry (doing duty); H. M.'s 52d, Colonel Campbell, Captain Bayley, Lieutenant Atkinson; H. M.'s 60th Rifles, Captain Waters, Lieutenant Curtis; Sirmoor Battalion, Major C. Reid; H. M.'s 8th, Lieutenant-Colonel Brooke, Major Bayne (dangerously), Captain Beere, Captain Sandilands, Lieutenant Pogson (since dead), Lieutenant Walker, Lieutenant Metge; H. M.'s 61st, Captain Deacon.



Lieutenant Moore, Lieutenant A.C. Young; Lieutenant Jenkins, 57th Native Infantry, attached to 4th Sikhs; Brigadier-General Nicholson, dangerously; 1st Fusiliers, Captain Greville; Captain Caulfield, 3d Native Infantry (doing duty), Captain Graydon, 16th Native Infantry (doing duty); Lieutenants Wemyss, Owen, Lambert, Woodcock, 55th Native Infantry (doing duty), Lieutenant Speke, 65th Native Infantry (doing duty); 1st Punjaub Infantry, Lieutenant Nicholson, 2d Punjaub Cavalry (doing duty); Lieutenant Shelly, 11th Native Infantry (doing duty); Ensign Prior, local Officer, (doing duty); 2d Punjaub Infantry, Captain Green, Lieutenant Frankland, Madras Infantry; 4th Punjaub Infantry, Lieutenant Homfray (since dead); Guide Infantry, Lieutenant Read, 57th Native Infantry (doing duty). The following Ordnance has been captured:—In position and in the streets, 35 Pieces of sorts, in the Magazine, 171—total 206. The amount of shot and shell is unlimited. I have communicated the contents of this to Government.

I am &c.

NEVILLE CHAMBERLAIN,

*Adjutant General of the Army.*

*P. S.—18th.* During the night we advanced our left up to Abbott's House and also Khan Mahomed's House. This gives us a strong position up to within 150 yards of the Palace walls. All our Mortars are bearing upon the Jumma Musjid and the Southern part of the Town, which is being fast evacuated, the resistance being much less on our right; we are also progressing by working through the houses. The King and Royal family are said to have evacuated the Palace and gone to the old Fort outside the City to the South. Our very small number makes it necessary to be cautious in taking possession of so large a City, for from the great number we have of sick and wounded, and our loss on the day of the assault, have reduced us very much. This was too late to be sent yesterday.

N. CHAMBERLAIN.

***The Mutiny day by day.*****GENERAL ORDERS.**

BY

HIS EXCELLENCY THE COMMANDER IN CHIEF,

*Adjutant General's Office, Calcutta, 9th November 1857.*BY THE RIGHT HONOURABLE THE GOVERNOR GENERAL OF INDIA  
IN COUNCIL.*Fort William, 5th November 1857..*

*No. 1383 of 1857.*—The Right Hon'ble the Governor General in Council has received a Despatch from Major General Wilson, in continuation of that which was published in the Notification No. 1257, of the 8th ultimo, and completing the Narrative of the Capture of Delhi.

The Reports and Returns which accompany this Despatch establish the arduous nature of a contest carried on against an Enemy vastly superior in numbers, holding a strong position, furnished with unlimited appliances, and aided by the most exhausting and sickly season of the year.

They set forth the indomitable courage and perseverance, the heroic self-devotion and fortitude, the steady discipline and stern resolve of English Soldiers.

There is no mistaking the earnestness of purpose with which the struggle has been maintained by Major-General Wilson's Army. Every heart was in the cause; and whilst their numbers were, according to all ordinary rule, fealfully unequal to the task, every man has given his aid wherever and in whatever manner it could most avail to hasten retribution upon a treacherous and murderous foe.

In the name of outraged humanity, in memory of innocent blood ruthlessly shed, and in acknowledgment of the first signal vengeance inflicted on the foulest treason, the Governor General in Council records his gratitude to Major-General Wilson and the brave Army of Delhi. He does so with the

sure conviction, that a like tribute awaits them, not in England only, but wherever, within the limits of civilization, the news of their well-earned triumph shall reach.

Majr. General Wilson has testified to the earnest and efficient support which he has received from every branch of the Force under his command.

To Major F. Gaitskell, who, on Brigadier Garbett being disabled by a wound, assumed the Command of the Artillery in the Field, and to the Officers and Men of that Arm—to Lieutenant-Colonel Hogge, Director of the Artillery Depot, who volunteered his services as Commissary of Ordnance with the Siege Train—to Captain J. Young and to the other Officers of that branch, the Governor General in Council tenders his cordial thanks for their exertions during the whole siege.

To Lieutenant-Colonel Baird Smith, for the able and successful conduct of the siege operations, under the discouragement of sickness and pain, the best thanks of the Governor General in Council are eminently due. This distinguished Officer was admirably seconded by Captain A. Taylor, and the Officers and Men of the Engineer Brigade.

To Brigadier Hope Grant, C.B., Commanding the Cavalry Brigade, and to Brigadiers J. Longfield and W. Jones, C.B., Commanding the Brigades of Infantry, the Governor General in Council offers his warm acknowledgments of their excellent service; as also to Colonel Campbell, Commanding Her Majesty's 52nd Light Infantry; to Major C. Reid, Sirmoor Battalion; to Colonel Jones, Commanding 1st Battalion, Her Majesty's 60th Rifles; and to Colonel J. Denuis, of Her Majesty's 52nd Light Infantry, to whose care the charge of the Camp was confided during the operations against the town. The manner in which these Officers have discharged their duties is highly appreciated by the Government.

It is a matter of the deepest regret to the Governor General in Council, that the mortal wounds received by Brigadier General Nicholson in the Assault, to the success of which he so

*The Mutiny day by day.*

eminently contributed, have taken from the Army of India one of its brightest ornaments, and have deprived the state of services which it can ill afford to lose. The services rendered by Lieutenant-Colonel H. Burn, attached as Field Officer to the 1st Brigade of Infantry, and by Captain Seymour Blane, (Her Majesty's 52nd Light Infantry) Brigade Major to Brigadier General Nicholson, have earned the approbation of the Government.

The Governor-General in Council cordially acknowledges the admirable manner in which the Staff of the Field Force and the General Staff of the Army have performed their arduous duties, and to Brigadier-General Chamberlain, Adjutant General of the Army; to Captain H. W. Norman, Assistant Adjutant General; to Major R. S. Ewart, Deputy Assistant Adjutant General; to Captain E. B. Johnson, Assistant Adjutant General of Artillery; to the Officers of the Quarter Master General's Department, Captain D. M. Shute and Captain H. M. Garstin; as also to Captain W. S. R. Hodson, who has performed good service with his newly raised Regiment of Irregular Horse, and at the same time conducted with great ability the duties of the Intelligence Department; to Lieutenant F. S. Roberts, attached to the Artillery Brigade as Deputy Assistant Quarter Master General; to Lieutenant-Colonel Keith Young and the Officers of the Judge Advocate General's Department; as well as to Captain C. H. Barchard, Captain J. R. Turbull, Captain R. H. C. D. Lowe, Lieutenant R. C. Low, and to Major H. A. Ouvry, attached to the Personal Staff of Major-General Wilson, the Governor General in Council offers his best thanks, for the zealous assistance they have afforded to their Commander and to the State. The Governor General in Council has much pleasure in recognizing the valuable aid rendered to the Force by the Officers of the Civil Service who have been attached to it, and His Lordship in Council desires to record his approbation of the services of Mr. Hervey Greathed, whose untimely

death is a heavy public loss; of Mr. C. B. Saunders, and of Mr. R. M. Clifford, who made themselves most useful to the Major-General in action; and of Sir T. Metcalfe whose gallantry in conducting the Assaulting Column under Colonel Campbell through the City was conspicuous.

While tendering his thanks to the Officers, whose conduct on the occasion of the final assault of the City has been brought to his notice, the Governor General in Council is anxious not to overlook the gallantry displayed on other occasions by several Officers who were debarred by wounds or sickness from joining in the operations of that day. The distinguished services of Brigadier St. G. D. Showers, of Colonel A. M. Becher, Quarter Master General of the Army, of Lieutenant-Colonel Seaton, C.B., 35th Native Infantry, of Lieutenant-Colonel Murray Mackenzie, Major J. Coke, and Captain H. Daly, Commanding the Guides, deserve the recognition, and have gained the approval of Government.

Lieutenant-Colonel W. B. Thomson, Deputy Commissary General, and the other Officers serving in the Commissariat Department, are entitled to the thanks of the Governor General in Council for the efficiency with which their duties were performed.

The arrangements made by Superintending Surgeon E. Tritton, for the care and comfort of the numerous patients in Hospital, have been most satisfactory, and the Governor General in Council has pleasure in offering to that Officer, as well as to the Regimental and Staff Officers of the Medical Department, this acknowledgment of their good service.

The Governor General in Council desires to express to the Non-Commissioned Officers and Men of Her Majesty's 9th Lancers and Carabineers the great satisfaction with which he has received the report of the cheerful and effective assistance rendered by them to their comrades of the Artillery in working the Batteries.

To all the Troops, European and Native, to the Officers, Non-Commissioned Officers and Men serving with the Field Force, His Lordship in Council offers his hearty thanks for the gallantry, perseverance, skill and discipline which they have displayed throughout the service on which they have been employed.

Where so much have been done to command admiration, it is difficult fairly to select acts for particular notice. But the Governor General in Council feels that no injustice will be done to any man if he offers a tribute of admiration and thanks to the brave Soldiers who, under Lieutenants Home and Salkeld, accomplished the desperate task of blowing open the Cashmere Gate.

From first to last, from the first advance of the devoted little band against the ramparts, throughout the perilous operation so successfully achieved, to the last act of Bugler Hawthorne in tending his Officer's wounds under a heavy fire, the deed was one of deliberate and sustained courage, as noble as any that has ever graced the annals of war. It will be the care of the Governor General in Council, that the brave men, Englishmen and Natives, who survive to share the glory of it, shall not go unrewarded, and that the memory of those who fell shall be honored.

It is a satisfaction to the Governor General in Council to find that, in estimating upon a late occasion the eminent services rendered by the Chief Commissioner of the Punjab to the State during the Siege of Delhi, and in expressing his earnest thanks for them, he has spoken the sentiments of the individual best able to appreciate those services at their true value. To the indefatigable exertions of Sir John Lawrence, Major General Wilson frankly attributes his own success.

There remains to the Governor General in Council the pleasing duty of noticing the part taken in the contest before Delhi by some of the neighbouring Native Chiefs.

The loyal and constant co-operation of the Maharajah of Pattiala and his Troops; the steady support of the Rajah of Jheend, whose Forces shared in the Assault; and the assistance given to the British Arms by Jan Fishan Khan and Sirdar Meer Khan Sahib, well call for the marked thanks of the Governor General in Council.

These true-hearted Chiefs, faithful to their engagements, have shown trust in the power, honor, and friendship of the British Government, and they will not repent it.

The Governor General in Council will also have the gratification of thanking Maharajah Runbeer Singh of Cashmere, for the timely support given by the Jummoo Contingent, placed by His Highness under the Command of Captain Richard Lawrence. The conduct of the Ruler of Cashmere has been that of a sincere ally.

FROM

MAJOR GENERAL A. WILSON,  
*Commanding Delhi Field Force,*

TO

THE ADJUTANT GENERAL OF THE ARMY.

*Delhi, the 22nd September 1857.*

Sir,

In continuation of my Despatch of the 16th instant, I now have the honor to forward a Report for the information of the Major General Commanding in the Upper Provinces, His Excellency the Commander-in-Chief, and the Government, of the further operations of the Force under my Command since that date.

During the 17th and 18th, we continued to take up advanced posts in the face of considerable opposition on the part of the Rebels, and not without loss to ourselves, three (3) Officers being killed and a number of Men killed and wounded.

***The Mutiny day by day.***

On the evening of the 19th, the Burn Bastion, which had given us considerable annoyance, was surprised and captured.

On the morning of the 20th, our Troops pushed on and occupied the Lahore Gate, from which an unopposed advance was made on the other Bastions and Gateways, until the whole of the defences of the City were in our hands.

From the time of our first entering the City, an uninterrupted and vigorous fire from our Guns and Mortars was kept up on the Palace, Jumna Musjid, and other important posts in possession of the Rebels; and as we took up our various position in advance, our light Guns and Mortars were brought forward and used with effect on the Streets and Houses in their neighbourhood.

The result of this heavy and unceasing Bombardment, and of the steady and persevering advance of our Troops, has been the evacuation of the Palace by the King, the entire desertion of the City by the inhabitants, and the precipitate flight of the Rebel Troops—who, abandoning their Camp, property, many of their sick and wounded, and the greater part of their Field Artillery, have fled in utter disorganization; some 4 or 5,000 across the bridge of boats into the Dooab, the remainder down the right bank of the Jumna.

The Gates of the Palace having been blown in, it was occupied by our Troops at about noon on the 20th, and my Head Quarters established in it on the same day.

The great diminution of our strength by losses in action

1st Troop 1st Brigade Horse Artillery.

2nd ditto 3rd ditto ditto.

No. 17 Light Field Battery.

9th Lancers.

1st, 2nd and 5th Punjaub Cavalry.

Hodson's Horse (200).

2 Companies Punjaub Cavalry Sappers.

H. M.'s 8th Regiment.

H. M.'s 75th ditto.

2nd and 4th Punjaub Infantry.

during the last few days, added to the severe sickness prevailing among the Troops, has prevented my immediately organizing and sending a Column in pursuit, but a Force as per margin, under Command of Lieutenant-Colonel Greathed, will march to-morrow morning towards Bolundshuhur and

Allyghur, to intercept the Rebels, whose intentions are said to



be to cross the Jumna at Muttra. My intelligence is, however, I regret to say, very defective.

The King, who accompanied the Troops, it is believed, for some short distance, last night gave himself up to a party of Irregular Cavalry, whom I had sent out in the direction of the fugitives, and he is now a prisoner under a Guard of

\*Mirza Moghul } Son of the  
Mirza Kheizr Sultan } King.  
Mirza Aboo Bukker } Grandson ditto.

European Soldiers. Three of the Shahzadas\* who are known to have taken a prominent part in the atrocities attending the

insurrection, have been this day captured by Captain Hodson and shot on the spot.

Thus has the important duty committed to this Force been accomplished, and its object attained. Delhi, the focus of rebellion and insurrection, and the scene of so much horrible cruelty, taken and made desolate; the King, a prisoner in our hands; and the Mutineers, notwithstanding their great numerical superiority, and their vast resources in Ordnance, and all the munitions and appliances of War, defeated on every occasion of engagement with our Troops, are now driven with slaughter in confusion and dismay from their boasted stronghold.

The details of the operations have been so fully entered into in my previous Despatch and annexed Reports and Returns from the various Commanding Officers, that little remains for me to say, but to again express my unqualified approbation of the conduct and spirit of the whole of the Troops, not only on this occasion, but during the entire period they have been in the Field.

For four months of the most trying season of the year, this Force, originally very weak in numbers, has been exposed to the repeated and determined attacks of an Enemy far outnumbering it and supported by a numerous and powerful Artillery. The duties imposed on all have been laborious, harassing and incessant, and notwithstanding heavy losses,

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both in action and from disease, have been at all times zealously and cheerfully performed.

I beg to add my most cordial concurrence in the commendations bestowed by Officers Commanding Brigades, Columns, and Detachments, on the Officers and Men named in their several Reports, and I have to express my own deep obligations to those Officers themselves for the valuable assistance I have at all times received from them.

To Major F. Gaitskell, who recently assumed Command of the Artillery in the Field, consequent on Brigadier Garbett having been disabled by a wound, and to the Officers and Men of that distinguished arm, to whose energy and untiring zeal the successful issue of the operations is so largely attributable, I have to offer my hearty thanks, and particularly am I indebted to that excellent Officer, Lieutenant-Colonel Hogge, Director of the Artillery Depôt, who volunteered his services as Commissary of Ordnance with the Siege Train, through whose able superintendence of the Park, and arrangements for the supply of ammunition to the Batteries, our Artillery was enabled to deal out the destruction which was effected; as also to Captain J. Young, Deputy Commissary, and to Mr. J. Stotesbury, Assistant Commissary of Ordnance for their exertions during the whole Siege.

To Lieutenant-Colonel R. Baird Smith, Chief Engineer, who in ill health and whilst suffering from the effects of a painful wound, devoted himself with the greatest ability and assiduity to the conduct of the difficult and important operations of the Siege—to his gallant and eminently talented Second, Captain A. Taylor, and to the whole of the Officers and Men of the Engineer Brigade, my thanks and acknowledgements are especially due for having planned and successfully carried out, in the face of extreme and unusual difficulties, an attack almost without parallel in the annals of Siege operations.

To that most brilliant officer, Brigadier General J. Nicholson, whose professional character and qualifications are

so well known and appreciated, I am under the greatest obligations for the daring manner in which he led his column to the assault; and I deeply deplore that his services are for the present lost to the State.

To Brigadier Hope Grant, C. B., Commanding the Cavalry Brigade, and to Brigadiers J. Longfield and W. Jones, C. B., Commanding Infantry Brigades, I am deeply indebted; and I have to offer my best thanks to Colonel G. Campbell, Commanding H. M.'s 52nd Light Infantry, and to that intrepid and excellent Officer, Major C. Reid, of the Sirmoor Battalion, both wounded whilst gallantly leading Columns of Attack; as also to Colonel J. Jones, Commanding the 1st Battalion 60th Royal Rifles—a Regiment which has shown a glorious example both in its daring gallantry and its perfect discipline to the whole Force—for the ability with which he covered the advance of the assaulting Columns.

I have pleasure also in bringing and favourably to notice the services rendered by Lieutenant Colonel H. P. Burn, attached as Field Officer to the 1st Brigade of Infantry, and by Captain Seymour Blane, H. M.'s 52nd Light Infantry, Major of Brigade, to Brigadier General Nicholson.

Colonel J. L. Dennis of H. M.'s 52nd Light Infantry, whom I placed in charge of the Camp during the operations, is entitled to my thanks and acknowledgements for the able dispositions he made with the Troops under his Command for the due protection of his important charge.

To the Officers of the General Staff of the Army, and to those of the Staff of the Field Force, my cordial acknowledgements are due for the admirable manner in which they have performed their responsible duties.

To that very distinguished Officer, Brigadier General N. B. Chamberlain, Adjutant General of the Army, who though still incapacitated by a severe wound previously received, proceeded to the Ridge at Hindoo Rao's and performed essential service after Major Reid had been wounded, and it became necessary to resume that position.

***The Mutiny day by day.***

To Captain H. W. Forman, Assistant Adjutant General of the Army, who, on this, as on each and every occasion, has been distinguished by his gallantry, zeal, and professional ability.

To that experienced Officer, Major R. S. Ewart, Deputy Assistant Adjutant General, and his gallant and energetic co-adjutor Captain D. M. Stewart, Deputy Assistant Adjutant General, who have conducted the duties of this important department with the Force much to my satisfaction, and to Captain E. B. Johnson, Assistant Adjutant of Artillery, who volunteered to Command the 24-pounder Breaching Battery, most ably and effectually carried out the duty assigned to him, and who rejoined my personal Staff on the morning of the Assault, and who has, throughout these operations, given me the most zealous and efficient support, I am greatly indebted for the assistance they have afforded me.

I beg also to bring very favourably to notice the Officers of the Quarter Master General's Department, Captain D. C. Shute and Captain H. M. Garstin, and Captain W. S. R. Hodson, who has performed such good and gallant service with his newly raised Regiment of Irregular Horse, and at the same time conducted the duties of the Intelligence Department under the orders of the Quarter Master General, with rare ability and success, also that active and gallant Officer, Lieutenant F. S. Roberts, attached to the Artillery Brigade, in the capacity of Deputy Assistant Quarter Master General.

Lieutenant-Colonel Keith Young, Judge Advocate General also, and his Deputies, Captain T. C. Ma'isey and Captain H. W. Wilson, most zealously assisted me in carrying my orders.

To the Officers of my personal staff—Captain G. H. Barchard, who has served with me first as my Orderly Officer and subsequently as Aide-de-Camp, and to whose zealous and untiring exertions I am deeply indebted—to Captain J. R.

Turnbull, 2nd Aide-de-Camp—Captain R. H. C. D. Lowe and Lieutenant R.C.G. Low, Extra Aides-de-Camp, I am under great obligations for the zeal and readiness with which they on this, and all other occasions, have performed their duties. My thanks are also due to Major H. A. Ouvry, who attended me on the day of Assault.

For the valuable aid at all times rendered by the Officers of the Civil Service who have been attached to the Force, I have to record my warm acknowledgements.

Mr. Hervy Greathed, Agent to the Deputy Governor, North-Western Provinces, (whose subsequent sudden death I deeply lament,) and Mr. C. B. Saunders, both of whom attended me in action, and made themselves most useful; Sir T. Metcalfe, Bart., whose gallantry in conducting Colonel Campbell's Assaulting Column through the City was conspicuous; and Mr. R. W. Clifford, who was also in attendance on me, are all entitled to my thanks.

Whilst, however, in acknowledging the services of those Officers whose good fortune it was to be present at the Assault, and in the Action of the 14th, I have only performed a grateful duty, I should be greatly wanting if I failed to record the names of those who have previously distinguished themselves, but who, incapacitated by wounds or sickness, were unable to join in the operations of that day. Amongst these I have specially to notice Brigadier St. G. D. Showers, whose cool gallantry on the numerous occasions in which he has been engaged, has been conspicuous.

Also Colonel A. M. Becher, Quarter Master General of the Army, who, though prevented by a severe wound, received in June last, from taking an active part in the Field, has at all times rendered me zealous assistance.

Lieutenant-Colonel T. Seaton, C.B., of the 35th Native Infantry, attached to the Force, a most valuable and experienced Officer, of whose services I have been deprived by a wound which he received on the 23rd July.

***The Mutiny day by day.***

That admirable Officer, Lieutenant-Colonel Murray Mackenzie, Commanding the 1st Brigade of Horse Artillery, of whose services I have also been deprived, by a wound which he received when in charge of the heavy Batteries at an early stage of our operations.

That Officer so distinguished in our Frontier Warfare, Major J. Coke, Commanding the 1st Punjaub Rifles, severely wounded at the head of his Regiment on the 12th August, and the gallant Commander of the Guides. Captain H. Daly, who was very severely wounded leading a most daring charge on the Enemy's Guns in the action of the 19th June.

I need not observe how largely the success and efficiency of an Army depends on the regularity of its supplies. Under circumstances of peculiar difficulty, in a District the population of which has been inimical, and in which Civil Authority has ceased to exist, this force has, from the commencement, been kept well and sufficiently provisioned with supplies of every description, the issue of rations to the Soldiers having been as regular, both in quantity and quality, as in Cantonments. My warmest thanks are therefore due to Lieutenant-Colonel W. B. Thomson, Deputy Commissary General, the admirable and indefatigable head of that Department in the Field ; as also to Lieutenant T. H. Sibley, Principal Executive Officer, to Lieutenant Waterfield, and to the other Officers serving in that Department.

With the Medical arrangements of Superintending Surgeon E. Tritton I have every reason to be satisfied, and he is entitled to my cordial acknowledgements. At such a trying season of the year, and in a notoriously unhealthy locality, the sickness and mortality has of course been heavy. In addition to those suffering from disease, the Hospitals have received almost daily accessions of wounded men. The labours, therefore, of the Medical Department have been unceasing, notwithstanding there has not been at any time the slightest failure in

the arrangements for the case and comfort of the very numerous patients.

Amongst those Medical Officers whose unwearied zeal and superior ability have come prominently before me, are, Officiating Superintending Surgeon C. McKinnon, M. D., who has been in Medical Charge of the 1st Brigade Horse Artillery; Surgeon J. H. Ker Innes, 60th Royal Rifles; Surgeon J. P. Brougham, 1st Fusiliers; Surgeon E. Hare, of the 2nd Fusiliers; Assistant Surgeon J. J. Clifford, M. D., of the 9th Lancers; and Assistant Surgeon W. F. Mactier, M. D., on the personal Staff of the late Commander-in-Chief.

Credit is also due to Surgeon D. Scott, M. D., Medical Store-Keeper.

The duties and offices of Provost Marshal to the Force have been conducted by a very deserving old Non-Commissioned Officer, Sergeant Major Stoud, 3rd Brigade Horse Artillery, whom I recommend to favourable consideration for a Commission.

The names of other Non-Commissioned Officers deserving of a similar reward I shall have the pleasure of submitting hereafter.

I should neither be fulfilling the repeatedly expressed wishes of the Artillery Officers attached to this Force, nor following the dictates of my own inclination, if I failed to acknowledge the valuable assistance which has, throughout the operations before Delhi, been most cheerfully given by the Non-Commissioned Officers and Men of H. M.'s 9th Lancers and the 6th Dragoon Guards in working the Batteries. Without it, owing to the comparatively small number of Artillerymen, I should have been quite unable to man the Batteries efficiently, or keep up the heavy fire which, aided by these Men, I have happily been able to do. To these Regiments, therefore, and to Brigadier Grant, who so readily placed a certain number of his Men at my disposal for such purpose, I tender my best thanks.

*The Mutiny day by day.*

It would be an omission on my part were I to pass over in silence the good services and loyal conduct of one who has already been rewarded by the Government for the friendly assistance he rendered to our Army in Afghanistan; I allude to the Nawab Jan Fishan Khan, who, with his brave nephew, Sirdar Bahadoor Meer Khan, and their retainers, accompanied me from Meerut, was present at the actions on the Hindun, and has since taken part in nearly every action in which this Force has been engaged.

Of the loyal services rendered to the State by the Rajah of Puttiala, which must be so well known to the Government, it may not be considered necessary for me to speak; but it is incumbent on me in my capacity as Commander of this Force to acknowledge officially the great assistance the Rajah's Troops have afforded me in enabling the numerous convoys of ammunition and stores to travel in security and safety to my Camp under their escort and protection.

Equally is it my duty to bring prominently to the notice of Government the admirable service performed by the Jheend Rajah and his Troops, under Command of Lieut.-Colonel H. F. Dunsford. They have not only had very harassing duties to carry out in the constant escort of convoys of sick and wounded Men, ammunition, &c., but they have also aided me in the Field on more than one occasion, and finally participated in the assault of the City.

Lastly, I trust I may be excused if I thus publicly acknowledge the all-important and invaluable aid for which I am indebted to the Chief Commissioner of the Punjab, Sir John Lawrence, K.C.B., to whose indefatigable exertions in reinforcing me with every available Soldier in the Punjab, the successful result of our operations is, I unhesitatingly pronounce, attributable, and I take this opportunity of recognizing the advantage derived from the presence of the Troops of His Highness the Maharajah Runbeer Singh in alliance with the



British Force, the moral effect of which has been great. And although unsuccessful, I regret to say, in the actual accomplishment of that part of the operations in which the Jumnoo Contingent was engaged on the 14th, I can attach no particle of blame to those Troops, as I consider, under the circumstances in which they were placed, the very strong position which they had to attack, and the prolonged and determined resistance which they encountered from an Enemy superior to them in number, arms, training and experience, that they behaved under their gallant Commander, Captain B. G. Lawrence, and the other English Officers serving with them, to whom my best thanks are due, as well as they could have been expected to do. Captain Lawrence's Report of his operations is annexed.

I have &c..

A WILSON, *Major-General,*  
*Commanding Delhi Field Force.*

FROM

MAJOR F. GAITSKELLI,  
*Commanding Artillery Brigade,*

TO

THE ASSISTANT ADJUTANT GENERAL,  
*Field Force, Delhi,*

*Delhi, 19th September 1857.*

Sir

I have the honor to submit, for the information of the Major General Commanding Field Force, my Report of the operations of the Artillery Brigade under my Command from the evening of the 6th to the morning of the 14th September.

The first Guns were placed in a light Battery on the evening of the 6th

*six 6-pounders.*  
*Two 24-pounders.*

September to the left front of the Sammy House Picquet, and about 950 yards from the Shah Bastion. These

Guns with (4) four heavy Guns in the light Batteries on the Ridge, and (2) two light Guns at the Crow's Nest were placed under the Command of Captain Hemmington, of the 1st Troop 1st Brigade Horse Artillery, the light Guns for the purpose of keeping the ground clear between the Shah Bastion and Kiasengunge, and the whole to aid generally in the defence of our right flank. These objects were principally attained on several occasions during the time the Siege Batteries were in play, from the 8th to 14th September, in repelling the attacks of the Enemy on our right (No. 1) Siege Battery.

## *The Mutiny day by day.*

No. I Siege Battery was commenced on the evening of the 7th September, and although originally intended for (10) ten Guns, was subsequently divided into two portions,—the one on the right under Major Brind, to silence the fire of the Guns on the Shah Bastion, distance 700 yards, containing (5) five 18-pounders, and one 8-inch howitzer; that on the left (4) four 24-pounders, under Major Turner (until that officer was compelled to leave from severe sickness, when Major Kaye received the Command) to ruin the defences and keep down, as far as practicable, the fire of the Cashmere Bastion distant 850 yards. The two portions of this Battery not being sufficiently ready on the morning of the 8th September, only two Guns in each were enabled to open fire; but during that day and the following night the whole were got into position, and a steady and most efficient fire was kept up from the right position until the assault on the morning of the 14th Instant, being a period of  $7\frac{1}{2}$  days, at a most sickly season of the year and there being no relief or only a partial one for Officers and Men. From the left portion the fire was kept up until the afternoon of the 10th, when the Battery caught fire, and was destroyed, fortunately only a few hours before the Guns were to have been removed to No. II Battery.

On the night of the 10th September No. II Battery, also consisting of two portions, was armed—the right with 7 8-inch Howitzers, and 2 18-pounder Guns, under Major Kaye, and the left—consisting of 9 24-pounder Guns, under the Command of Major J. H. Campbell, until the evening of the 11th, when, I regret to say, he was compelled, from a severe grape shot wound, to make over the Command to Captain E. B. Johnson. The right portion of this Battery was placed at a distance of 500 yards from the Cashmere Bastion, and was designed to destroy the Masonry parapet of the Bastion, dismount the Guns, strip off the Musketry parapet in the left face for 200 yards and destroy a small Tower in the curtain. The fire from this portion of the No. II Battery was sustained during the 11th, 12th, and 13th by day and night, and with the greatest success. The left portion of this Battery, 9 24-pounders, opened fire at a distance of 500 yards for the purpose of effecting a breach in the curtain immediately adjoining the right flank of the Cashmere Bastion, about  $\frac{1}{4}$  past 5 A.M. on the morning of the 11th September and by 9 o'clock, every gun on the Bastion was silenced, and until the night of the 13th September, an incessant fire was kept up with 5 Guns in making the breach, the other 4 being directed on the defences of the Cashmere Bastion, and of the parapet of the curtain.

The Siege Battery No. III, under Major E. W. S. Scott, was armed on the night of the 11th Instant with 6 18-pounder Guns at a distance of 160 yards from the left face of the Water Bastion, mounting 6 heavy and 2 light Guns, and a fire was opened from 4 Guns at 1 P.M. on the 12th; a greater number of Guns could not be used at once, as the embrasures required constant repairs. There were also 12  $5\frac{1}{2}$  inch Mortars attached to this Battery, under Captain Blunt, which shelled the interior of the Bastion and the ground to the left of the Church.

By 1 P.M. of the 13th Instant the wall was pierced, and a practicable breach of about 60 feet wide was made by dusk the same evening

It was subsequently ascertained that in addition to effecting the breach, 4 of the enemy's Guns were rendered unserviceable, and the carriages of the 2 light Guns destroyed.

No. IV Siege Battery, under the Command of Major Tombs, consisting of 4 10-inch and 6 8-inch Mortars, was armed on the evening of the 9th September, but did not (pursuant to orders received) open fire until the morning of the 11th, from which date, until the assault, an incessant and destructive fire was kept up from the whole Battery on the following points; *viz.*,—the Cashmere Gate and Bastion, the Church, Skinner's House, and the Water Gate and Bastion.

The several Batteries ceased their fire on the morning of the 14th, shortly before the assault was made.

I beg to recommend to the most favorable notice of the Major General Commanding, the services of Majors Brind, Campbell, Scott, Turner, Kaye and Tombs, Captains Remington, Johnson and Blunt, for the admirable manner in which they exercised the duties of their respective Commands; and I cannot praise too highly the conduct of every Officer, Non-Commissioned Officer and Soldier, who performed their duties with the greatest energy, and bore the constant exposure and hardship with the utmost cheerfulness, and I beg to recommend their services as recorded in the reports of Officers Commanding Batteries, herewith forwarded, to the Major General's favorable notice. I have also to acknowledge the services of Captain the Hon'ble A. Anson, H. M.'s 84th Regiment, and the Officers of other branches of Her Majesty's and the Company's Services who volunteered to serve with the Artillery, and who have been reported of most favorably by Commanding Officers of Batteries.

My best acknowledgements are also due to Lieutenant-Colonel Hogge, Commissary of Ordnance, for the arrangements he made in his Department, likewise to Lieutenant J. S. Frith, my Brigade Major, for his services during the operations and the assistance he has afforded me at all times.

I desire also to report the valuable services rendered by Detachments of H. M.'s 6th Dragoons Guard (Carabineers) and 9th Lancers, who did duty in the several Batteries, and who, by their steady conduct, gained for themselves, the highest approbation from the several officers Commanding Batteries.

I have to deplore the loss of two gallant Officers of the Artillery:— Lieutenant Hildebrand, who was killed in No. II Battery on the 8th September—an Officer who had performed much valuable service during the time the Force has been at Delhi, and Captain R. C. H. B. Fagan, who was killed in No. IV Battery on the evening of the 12th. This Officer, whose career during the whole period that the Force has been at Delhi, was marked by

***The Murthy day by day.***

unremitting energy and conspicuous devotion to his profession, had gained for himself the respect of Officers and Men in every branch of the Force.

The casualties among the Non-Commissioned Officers and Men in the several Batteries was not, I rejoice to state, great, and principally caused by the light Guns which the Enemy brought out against the Siege Batteries during the period under report.

A roll of casualties, from the 6th to 14th instant, is forwarded.

I have &c.,  
F. GAITSKELL, Major,  
Comdg. Artillery Brigade.

No. 21.

FROM

MAJOR F. GAITSKELL,  
*Commanding Artillery Brigade.*

TO

THE DY. ASST. ADJUTANT GENERAL,  
*Field Force, Delhi.*

*Delhi, 19th September 1857.*

Sir,

In continuation of my letter, No. 20, of this date, I have now the honor to report the operations of the Artillery Brigade on the 14th September, during the period of and after the assault.

The orders for the assault having been received during the night of the 13th September, immediate arrangements had to be carried out for the relief of the Officers and men of the Horse Artillery; and 3 Detachments of Foot Artillery were told off, consisting of 60, 20 and 20 Men, each under a Subaltern, to accompany the 1st, 2nd, and 3rd Columns of Assault respectively in order to take possession of the Guns on the Ramparts and turn them on the City.

These arrangements were, as far as practicable, carried out; and at the same time the Cavalry Brigade was re-formed. The left half of the 1st Troop 1st Brigade Horse Artillery were unable to join Major Reid's Column, as there were not sufficient Foot Artillery men to relieve the men of that troop in the right Batteries.

The Troop of Horse Artillery, under Major Tombs, with the Cavalry Brigade, was actively engaged with the enemy, who were in a ruined Suburb near Fakhairpore, outside the Cabul Gate of the City, where their Infantry, supported by Guns, occupied the ruined mud houses at a distance of about 250 yards. There being no Infantry with these Guns, which were unable to dislodge the Enemy from their position, and while holding their own, our Guns suffered very severely, for in addition the enemy brought

grape from a heavy Gun at the Lahore Gate to bear on them, thereby compelling the 2 advanced Guns of the Troop to retire about 20 yards, and the Enemy's Infantry advancing, was only held in check by repeated rounds of grape. At this time the right half troop of Captain Remington's Troop, under Lieutenant Lindsay, joined; but still the enemy continued a very heavy fire of grape and musketry causing many casualties among Men and Horses. Some of the Belooch Battalion now joined, and the enemy's fire gradually slackened, and Major Tombs' Detachment retired slowly and in good order, after 2 heavy Guns had by his orders been gallantly spiked (under a galling Musketry fire) by Lieutenant E. B. Traill.

Two pieces of Captain Money's troop of Horse Artillery were detached under Lieutenant C. Hunter, who opened fire on the Enemy's Cavalry and Infantry, who were making towards our rear, and directed the fire on Kisseengung until the Enemy had retreated beyond the range of his Guns.

The remainder of the Horse Artillery, consisting of the Head Quarters and remainder of Captain Money's Troop, also Major Turner's Troop (which was to have accompanied the 1st and 2nd Columns of Assault, but, from the Men not having been able to be relieved from the Siege Battery where they were stationed in sufficient time.) was left for the protection of the Camp with the Troops under the Command of Colonel Dennis, Her Majesty's 52nd Regiment.

No. 14 Light Field Battery, under Major Scott, was attached, on the morning of the 14th September, to the Reserve Column under Brigadier Longfield, at 10 A. M. 2 Guns were posted at the Street next the College Gardens, 2 at the Cabul Gate, and 2 at the Street passing Skinner's House; but were not actively engaged.

Two Guns of No. 17 Light Field Battery were attached to the 1st Column of Assault, and 2 to the 2nd Column; but all four were subsequently detached, under Captain Bouchier, to support the Cavalry Brigade, where they relieved Major Tombs' Troop of Horse Artillery, which had suffered very severely in Men and Horses, and after opening fire on Kisseengung and checking the enemy's advance from that direction, were in the evening with their 4 Guns posted, with the Cavalry Brigade at Ludlow Castle.

I beg especially to bring to the notice of the Major General Commanding the conduct of Major Tombs, his Officers and Men, which was in strict accordance with their past gallant services.

I also recommend to the favourable notice of the Major General, the services of Majors Scott and Turner, Captains Bouchier and Remington, and Lieutenants Wilson, Lindsay, Traill and C. Hunter, and all the Non-Commissioned Officers and Men under their Command.

I enclose the Report of Officers Commanding and trust that the services of the Artillery Brigade will be considered to have been such, during a long

***The Mutiny day by day.***

and arduous period, as to elicit the approbation of the Major General Commanding the Force.

I have, &c.,

**F. GAITSKELL,**

*Comdg. Artillery Brigade.*

FROM

**LIEUT.-COLONEL R. BAIRD SMITH,**

*Chief Engineer, Delhi Field Force,*

TO

**THE ASSISTANT ADJUTANT GENERAL,**

*Delhi Field Force.*

*Head Quarters, Delhi 17th September 1857.*

Sir,

I have the honor to submit herewith, for the information of the Major-General Commanding, the following Report of the operations carried on by the Engineer Brigade under my Command during the siege and capture of Delhi.

2. To make these more intelligible, I may first detail very briefly the leading and characteristic features of the place.

3. The Eastern face of the City rests on the Jumna, and during the season of the year when our operations were carried on, the stream may be described as washing the base of the walls. All access to a besieger on the River Front is, therefore, impracticable. The defences here consist of an irregular wall with occasional Bastions and Towers, and about one-half of the length of the River Face is occupied by the Palace of the King of Delhi and its outwork, the old Mogul Fort of Selimgurh.

4. The River may be described here as the chord of a rough arc formed by the remaining defences of the place. These consist of a succession of Bastioned Fronts, the connecting curtain being very long, and the outworks limited to one crown-work at the Ajmere Gate and Martello Towers, mounting a single Gun at such points as require some additional flanking fire to that given by the Bastions themselves. The Bastions are small, mounting generally 3 Guns in each face, 2 in each flank, and 1 in embrasure at the salient. They are provided with masonry parapets about 12 feet in thickness, and have a relief of about 16 feet above the plane of site. The curtain consists of a simple masonry wall or rampart 16 feet in height, 11 feet thick at top, and 14 or 15 feet at bottom. This main wall carries a parapet loopholed for musketry 8 feet in height and 3 feet in thickness. The whole of the land front is covered by a berm of variable width, ranging from 16 to 30 feet, and having a scarp wall 8 feet high; exterior to this is a dry ditch of about 25 feet in breadth and from 16 to 20 feet in depth. The counter-scarp is simply an earthen slope easy to descend. The Glacis is a very short one, extending only 50 or 60 yards from the counter-scarp; using general terms, it covers from the besieger's view from  $\frac{1}{4}$  to  $\frac{1}{2}$  of the height of the walls of the place.

5. These details will, I trust, be sufficient to give a general conception of the nature of the defences of Delhi. They are, in a word, modernised forms of the ancient works that existed when the City fell before Lord Lake's Army in 1803. They extend about 7 miles in circumference, and include an area of about 3 square miles.

6. The ground occupied by the besieging force presents some features deserving of notice here, as having exercised a most important influence on the plan and progress of the works of attack. On the Western side of Delhi, there appear the last outlying spurs of the Aravelli Mountains, represented here by a low ridge which disappears at its intersection with the Jumna, about 2 miles above the place.

The drainage from the Eastern slope of the ridge finds its way to the River along the Northern and North-western faces of the City, and has formed there a succession of parallel or connected ravines of considerable depth. By taking advantage of these hollow ways, admirable cover was constantly obtained for the Troops, and the labour of the siege most materially reduced. The whole of the exterior of the place presents an extraordinary mass of old buildings of all kinds, of thick brush-wood and occasional clumps of forest trees, giving great facilities for cover which, during the siege operations at least, proved to be, on the whole, more favourable to us than to the Enemy.

In anticipation of the siege, means had been taken to store the Engineer Park with all the materials and tools likely to be required during the operations, the Siege Train placing the Artillery means in an equally satisfactory state of efficiency. Ground was broken as soon after its arrival as possible, being on the night of the 7th September 1857.

7. The project of attack submitted by me to the Major General Commanding, and honored with his sanction provided for a concentrated, rapid and vigorous attack on the front of the place, included between the Water or Moira and Cashmere Bastions, provision being made at the same time for silencing all important flanking fire, whether of Artillery or Musketry, that could be brought to bear on the lines of advance to be taken by the Assaulting Columns. Due care was also taken to protect the exposed right flank of the trenches from sorties. The left was secured by being rested on the river and by the occupation of the Koodsee Bagh, a very strong post in front.

8. The best information procurable indicated that, on the front of attack, the fire of from 25 to 30 pieces might have to be subdued. To effect this 54 Siege Guns were available, and were distributed as follows:—

Siege Battery No. 1, for 10 pieces, by which 6 were to be directed

5	..	18-Pounders.
1	..	8-inch How tzer.
6	..	Total.

Distance 700 yards.  
4 .. 24 Pounders.

against the defences of the Shah and Moree Bastions, with the object of ruining them and preventing the flank fire from bearing on the advance of the Assaulting Columns. The remaining 4 were directed against the

Cashmere Bastion, with the object of diverting its fire from the covering and working parties engaged on No. 2 Battery.

**The Mutiny day by day.**

**Siege Battery No. 2, for 18 pieces, designed to breach the curtain to the**

24-Pounders	..	..	..	..	8
15-Pounders	..	..	..	..	3
8-inch Howitzers	..	..	..	..	7
Total	..	..	..	..	18

Distance 600 yards.

right of the Cashmere Bastion, to destroy the defences of the Bastion itself, and to strip off the parapet for about 200 yards on each side of the breach, and thus deprive Infantry of all cover.

**Siege Battery No. 3, for 8 heavy Guns and 12 Coehorn Mortars, designed**

18-Pounders	..	..	..	..	8
Coehorns	..	..	..	..	12
Total	..	..	..	..	20

Distance 160 yards.

to destroy the defences of the Moira or Water Bastion, and to maintain a heavy fire of shells on both the Water and Cashmere Bastions. In the original project, the site of this Battery was about 330 yards from the Water

Bastion, but subsequent examination making it doubtful whether the position was an effective one, Captain Taylor pushed a reconnaissance in advance to the Custom House or within 160 yards, and finding there an excellent site for a Breaching Battery, reported the circumstance to me. I obtained at once the Major-General's sanction to this bold advance, and it is satisfactory to be able to say that Battery No. 3 was constructed with remarkably few casualties, and proved one of the most efficient of the series. It was, however, limited to 6 breaching Guns, and in the demolition of the light parapets was aided by 9-pounders.

**Battery No. 4, for 10 heavy Mortars, to shell the whole of the ground**

10-inch Mortars	..	..	..	..	4
8-inch Mortars	..	..	..	..	6
Total	..	..	..	..	10

between the Water and Cashmere Bastions, and the localities in the neighbourhood, where the Enemy would be likely to find shelter.

**9. On the extreme right, 4 heavy Guns were left in position, and on an**

9-Pounders	..	..	..	..	4
24-Pounders	..	..	..	..	2
Total	..	..	..	..	6

advanced plateau on the ridge, a battery for 6 field Guns was constructed, by which the only route open to the Enemy's sorties would be swept by grape. Although the Enemy gave

some annoyance with light Guns in this direction, he was unable to make a single effective sortie.

**10. At different times, between the 7th and 11th, these Batteries opened fire with an efficiency and vigor which excited the unqualified admiration of all who had the good fortune to witness it. Every object contemplated in the attack, was accomplished with a success even beyond my expectations, and I trust I may be permitted to say, that while there are many noble passages in the History of the Bengal Artillery, none will be nobler than that which will tell of its work on this occasion.**

**11. On the night of the 13th, the breaches in the curtain between the Water and Cashmere Bastions were examined personally by Lieutenants Grested, Medley, and Lang, of Engineers, who reported both in excellent condition for assault. No. 1 Siege Battery had effectually disposed of the Mooree Bastion, No. 2 had completely destroyed the musketry cover near the main**



breach; No. 3 had done the same near the Water Bastion breach, and it was evident that the place was ripe for the Assault. On reporting the circumstance to the Major General he issued instant orders, naming the next morning or that of the 14th for this critical operation.

12. The details of the assault will be best laid before the Major General by the Brigadiers Commanding the different Columns. I will, therefore, only state here that the distribution of the Engineer Officers was made.

*1st Column, under Brigadier General Nicholson.*

Captain A. Taylor.  
Lieutenant Medley.  
„ Bingham.  
„ Lang.  
Ensign. Chalmers.

*2nd Column, under Brigadier Jones, H. M.'s 60th.*

Lieutenant Greathed.  
„ Hovenden.  
„ Murray.  
Ensign Gustavinski.

*3rd Column, under Brigadier Campbell, H. M.'s 52nd.*

Lieutenant Home.  
„ Salkeld.  
„ Tandy.  
Ensign Nuthall.

*4th Column, under Major Reid.*

Lieutenant Maunsell.  
„ Tennant.

*Reserve Column, under Brigadier Longfield.*

Lieutenant Ward.  
„ Thackeray.

These Officers accompanied the Columns to which they were attached during the assault, and I grieve to say that a large proportion fell wounded more or less dangerously, under the heavy fire of the Enemy.

It only remains for me, in closing this Report, to bring under the favourable notice of the Major General Commanding, the Officers of the Brigade whose merits have been conspicuous.

To my Second in Command, Captain Taylor, Director of the Trenches, I have been indebted for the most constant, cordial, and valuable assistance throughout the whole period of the operations. Gifted with rare soundness of professional judgment, his advice has been sought by me under all

### ***The Mutiny day by day.***

circumstances of difficulty or doubt, and I find that I cannot express too strongly to the Major General my sense of the valuable services this Officer has rendered.

To Captain Chesney (very severely wounded), Brigade Major of Engineers, I have also hearty acknowledgments to make for the uniform efficiency, zeal, and intelligence with which he has conducted the duty of his office.

Lieutenants Greathed and Manusell, Directing Field Engineers on the Left and Right Attacks respectively, have earned my warm approbation by the manner in which they performed duties involving great labour and exposure. Both guided Columns of Attack, and both, I grieve to add, were severely wounded while doing so.

The gallantry with which the Explosion Party under Lieutenants Home and Salkeld performed the desperate duty of blowing in the Cashmere Gate in broad daylight, and in the face of the Enemy, will, I feel assured, be held to justify me in making special mention of it. The party was composed, in addition to the two Officers named, of the following:—

Serjeant John Smith ..	}	Of the Sappers and Miners.
.. A. B. Carmichael ..		
Corporal F. Burgess, <i>alias</i> ..		
Joshua Burgess Grierson ..		
Bugler Hawthorne .. ..		H. M.'s 52nd.
14 Native Sappers and Miners.		
10 ditto Punjab Sappers and Miners.		

Covered by the fire of H. M.'s 60th Rifles, this party advanced at the double towards the Cashmere Gate; Lieutenant Home, with Serjeants John Smith and Carmichael and Havildar Madhoo, all of the Sappers, leading and carrying the powder bags, followed by Lieut. Salkeld, Corporal Burgess, and a section of the remainder of the party. The advanced party reached the Gateway unhurt, and found that part of the Drawbridge had been destroyed; but passing across the precarious footing supplied by the remaining beams, they proceeded to lodge their powder against the Gate. The wicket was open, and through it the Enemy kept up a heavy fire upon them. Sergeant Carmichael was killed while laying his powder, Havildar Madhoo being at the same time wounded. The powder being laid, the advanced party slipped down into the ditch to allow the firing party under Lieutenant Salkeld to perform its duty. While endeavoring to fire the charge, Lieutenant Salkeld was shot through the leg and arm, and handed over the slow match to Corporal Burgess, who fell mortally wounded just as he had successfully performed his duty. Havildar Tiluk Sing, of the Sappers and Miners, was wounded, and Ram Heth Sepoy, of the same corps, was killed during this part of the operation.

The demolition having been most successful, Lieutenant Home, happily unwounded, caused the bugler to sound the Regimental call of the

52nd Regiment as the signal for the advance of the Column. Fearing that amid the noise of the assault, the sound might not be heard, he had the call repeated three times, when the Troops advanced, and carried the Gateway with entire success.

I feel assured that a simple statement of the facts of this devoted and glorious deed will suffice to stamp it as one of the noblest on record in Military History. Its perfect success contributed most materially to the brilliant results of the day, and Lieutenants Home and Salkeld, with their gallant Subordinates, European and Native, will I doubt not, receive the reward which valour before the enemy so distinguished as theirs has entitled them to.

Lieutenant Home mentions with special approbation the cool courage of Serjeant John Smith, and while sincerely regretting their loss, he states that the gallantry shown by Sergeant Carmichael and Corporal Burgess could not have been surpassed. Bugler Hawthorne's conduct has also been particularly commended. This brave man, after performing his own dangerous duty, humanely attached himself to Lieutenant Salkeld, bound up his wounds under a heavy musketry fire, and ultimately had him removed without further injury, and I beg to commend him most cordially to the favourable notice of the Major General.

The following Native Officers and Sepoys of the Sappers and Miners are reported by Lieutenant Home to have shown the most determined bravery and coolness throughout the whole operations. Havildar Madhoo, who accompanied the advance under Lieutenant Home; Soobadhar Toola, Jemadar Bislam, Havildars Tiluk Singh and Ram Turas and Sepoy Sahib Singh, who were with the firing or reserve parties. The remarkable courage shown by the Native Officers and men in assisting their wounded European comrades deserves to be mentioned as showing the excellent feeling between them.

Lieutenant Medley (wounded) was appointed to guide the 1st Division of the 1st Column to the main breach, which he had personally examined the night before, and though shot through the arm continued with the Column till it was established in the Cabul Gate. Lieutenant Lang was appointed to similar duties with the 2nd Division and both officers have earned my best thanks by the gallant and efficient manner in which they did their work. Lieutenant Hovenden (wounded) conducted the ladder party of the 2nd Column, and here, as on all occasions, showed the intelligence and gallantry which have made his services so valuable during the siege.

I beg also to bring under the notice of the Major General the good service on this occasion of Lieutenant Bingham, an old and most meritorious Officer, whose gallantry in action on previous instances had led the

## *The Mutiny day by day.*

Government to confer upon him the Commission of Lieutenant. He Commanded a party of the Corps of Sappers and Miners in the assault of the main breach with his accustomed bravery, and I respectfully recommend him for favorable consideration.

To Lieutenant H. A. Brownlow (dangerously wounded) who had charge of the Engineer Park, I have to offer my most cordial acknowledgments for his incessant exertions to expedite the works. This Officer was dangerously wounded while carrying to the 3rd Column material and tools which it was supposed to be in need of.

I have only further to bring under the notice of the Major General Commanding, the admirable conduct of the remaining Officers and Men of the Brigade. None could have displayed a higher and better spirit than they have done, and whether in the trenches, in the assault, or during the occupation, they have been forward and zealous in every duty. I may be allowed to refer especially to the gallantry and devotion of the Sappers and Miners under their acting Commandant Lieutenant Mamesell—a remnant of the Corps which mutinied in May last. Throughout the whole operations these Men have shown a distinguished bravery and fidelity to their salt, and it has been my agreeable duty to bring from time to time special instances of these qualities to the notice of the Major General. The Punjaub Sappers and Miners, under their Commandant Lieutenant Gulliver (of whose valuable services I was deprived during the siege by his severe illness) and their Acting Commandant Lieutenant Home, have done excellent service, and give the best possible promise of being an efficient and soldier-like Corps.

The Pioneers, under Lieutenant Bingham, have proved to be a most useful and fearless body of Men. Though designed for Works only and being unarmed and only rudely organised for the occasion, they have shown perfect readiness to work under fire, and have taken their turn in the most exposed and dangerous positions it has been necessary to occupy.

I take the liberty of mentioning here that since I joined this Camp I have received most valuable aid in Military Arrangements from my Assistant (in the Civil Department) Mr. Harry Marten.

I deeply regret the heavy list of casualties which accompanies this Report. In Lieutenant Tandy the Corps has lost one of its most gallant and promising young Officers; but I earnestly hope that the Government will be only temporarily deprived of the services of the wounded, all of whom, I am happy to be able to report, are doing well.

I have &c.,

R. BAIRD SMITH, *Lieut.-Col.*,

*Chief Engineer, Delhi Field Force.*

## ***The Mutiny Day by Day.***

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FROM

BRIGADIER J. HOPE GRANT,  
*Comdg. Cbvy. Brigade, Delhi Field Force.*

TO

THE DEPUTY ASST. ADJUTANT GENERAL,  
*Headquarters.*

*Delhi, 17th September 1857.*

Sir,

I have the honor to report, for the information of Major General Wilson, that, according to instructions received, I proceeded before daylight on the morning of the 14th with 200 of H. M.'s 9th Lancers and 410 Natives from the Guides, 1st, 2nd and 5th Punjaub Cavalry, and Hodson's Horse, 3 Guns of the 1st Troop Horse Artillery, and 4 Guns of the 2nd to the neighbourhood of the 1st Field Battery, where I remained till the assault of the Town had commenced. At about 6 o'clock the Major General sent me instructions to proceed to the front. I formed up opposite the walls of the Town—the 9th Lancers forming the advanced party, the Irregular Cavalry the reserve,—and proceeded till I came to the Mores Bastion, which was in our hands. We advanced on to the Cabul Gate; and at this point a most heavy fire of grape and musketry was opened upon us,—the grape coming from the Lahore Gate, and the musketry from the Gardens and Houses of Kishengung on our right, between 2 and 300 yards off. Major Tombs, who was in Command of the Guns, as fine an Officer as there is in the Company's Service, drove the Enemy out from our right flank, and succeeded in spiking two Guns in Battery,—one an 18-pounder, and the other a 12-pounder iron Gun. We retired a short distance to get out of the heavy fire that was opened upon us; but in so doing the Enemy came out in great numbers through the Gardens, and it was necessary to retain our position to prevent the Enemy from taking our Batteries and the Cashmere Gate. A party consisting of an Officer and 80 of the Infantry Guides, came down to our support, and though so small a number, went gallantly into the Gardens and took up a position in a House close to the Battery. I regret, however, to say, the Officer in Command, a most gallant young fellow—Lieutenant Bond—was wounded in the head and had to be taken away; but the Guides held out most bravely till they got surrounded in the House and were in great danger. A detachment of the Belooch Battalion, under Command of Lieutenant-Colonel Parquhar, however, came to their assistance, and brought them away in safety. The fire now slackened, and we were enabled to retire a short distance, where we had little to fear.

2. I beg leave to state I have never in the whole course of my life seen so much bravery and so much noble conduct displayed by Men as was the case in the Brigade I had the honor to Command. Major Tombs and the two Officers under him in Command of the two Troops,—Lieutenant Wilson and Lieutenant Lindsay, as well as the Adjutant Sankey, did their duty in a manner most praiseworthy, and the Enemy were completely checked by the

***The Mutiny day by day.***

fire from their Guns. In the 1st Troop one European and one Native were killed, 4 Horses were killed and 9 wounded. In the 2nd Troop, 1 European and 1 Native killed, 17 Europeans and 13 Natives wounded, 13 Horses killed, and 9 wounded, and one Officer's Charger. Nothing could be finer than the conduct of the 9th Lancers,—one Squadron Commanded by Captain French and the other by Captain Sarel, the whole by Captain Drysdale. Not a man flinched from his post though under this galling fire for two hours, and when a poor fellow got knocked over it seemed to put the Men in good spirits. I am sorry to say, however, the 9th Lancers had 38 Men wounded, 61 Horses killed, wounded and missing, and the Officers lost 10 Horses.

3. The behaviour of the Native Cavalry was also admirable. Nothing could be steadier, nothing could be more soldier-like than their bearing. The Guide Cavalry, Commanded by Captain Sandford—a most excellent and useful Officer—on outpost duty, lost 1 Native Officer killed, 1 Non-Commissioned Officer, and 14 Privates. Lieutenant Hodson Commanded a Corps raised by himself, and he is a first-rate Officer, brave, determined, and clear-headed. Lieutenant Watson, Commanding the 1st Punjab Cavalry, Lieutenant Probyn, Commanding the 2nd, and Lieutenant Younghusband, the 5th, are also most excellent Officers. I was afterwards joined by Captain Bouchier's Battery, which was of great service and enabled us to hold our position.

4. I beg especially to bring to the notice of Major General Wilson, the names of the Officers mentioned in this despatch, and also that of Captain Hamilton, my Brigade Major, a most excellent Officer in every respect, ready and willing to do his duty whenever he is called upon. His Horse was shot upon this occasion.

5. Also that of the Hon'ble Captain Anson, my acting Aide-de-Camp, who got wounded in the hand by a musket shot. He is most useful and energetic, and promises to be a first-rate Officer. Also Captain Rosser, of the Carabineers; and Captain Hall, of the 4th Irregular Cavalry, who were also extra Aides-de-Camp on that day. The former, I am sorry to say, was struck by a musket ball in the head, and there are little hopes of his recovery. The other had his Horse shot under him. I beg also to mention the name of Lieutenant Jones, Deputy Assistant Quarter Master General, who is most zealous and attentive to all his duties. Colonel Custance, of the Carabineers, Commanded the Reserve, which he did to my satisfaction. I regret I am unable to give a return of the casualties in several of the Regiments of Native Cavalry, as I have not yet received them; but the whole shall be sent as soon as practicable.

I have &c.,

J. HOPK GRANT, *Brigadier,*  
*Commanding Cavalry Brigade,*  
*Delhi Field Force.*

FROM

**CAPTAIN W. BROOKES,**  
*75th Regiment,*

TO

**THE ASSISTANT ADJUTANT GENERAL,**  
*Field Force.**Camp before Delhi, 17th September 1857.*

Sir,

In compliance with an order received from Lieutenant Colonel Herbert, 75th Regiment, I have the honor to forward, for the information of Major General Wilson, Commanding Field Force, the following report of the proceedings, so far as they are known to me, of the 1st Column of Attack, under Brigadier General Nicholson, who was unfortunately severely wounded on the day named, and obliged to relinquish the Command.

The Regiments composing the 1st Column—Detail of Artillery: 300 Men H. M.'s 75th Regiment; 250 1st European Bengal Fusiliers; 500 2nd Punjaub Infantry, which were to assault the breach in the Cashmere Curtain Gate, were under arms at 3 am. on the morning of the 14th, and moved to the assault as follows. The 1st Fusiliers, led by Brigadier General Nicholson in person, escalated the left face of the Cashmere Bastion, H. M.'s 75th Regiment and 2nd Punjaub Infantry, covered in splendid style by a portion of H. M.'s 60th Rifles, moved to assault the breach on our left of the Cashmere Gate.

Colonel Herbert, 75th, being wounded on the Glacis, the Command of this portion of the Assaulting Column devolved on myself, and it is with great pleasure that I testify to the gallant conduct of all the Troops engaged. Lieutenant Fitzgerald, H. M.'s 75th Regiment, led up the breach most nobly, and I regret that this Officer's death from a grape shot immediately afterwards renders my venturing to bring his name to the notice of the General Commanding useless. The Column, on being established within the City re-formed, and agreeably to orders from Brigadier General Nicholson, moved towards the right. During this movement the Enemy maintained a heavy flanking fire and inflicted much loss on the column. Their loss was also considerable. On reaching the various Batteries, Moree, &c., a party of Men were to occupy them, and the Column dashed on at a rapid rate. On reaching the head of the street at Cabul Gate, the Enemy again made a resolute stand, but were speedily driven forward. A portion of the 1st Column was halted here, and proceeded to occupy the Houses round the Cabul Gate; a portion of the 75th, Commanded by Captain Freer, H. M.'s 27th Regiment attached, supported by myself, continued the pursuit, accompanied by some Men of other Corps, 60th Rifles, 1st European Bengal Fusiliers, &c. On advancing about 200 yards along the Rampart Road, which here became so narrow that scarce 4 Men could stand abreast, the Enemy opened a heavy and destructive fire from an iron Gun on the wall and a small brass Gun on the pathway, together with musketry from behind a barrier on the road. I regret to say that notwithstanding repeated charges up this narrow channel, the troops did not succeed in effecting a passage. The loss was so severe both in Men and Officers, that I felt

## *The Morning day by day.*

it my duty to desist, after two-hours, from any further attempt. Brigadier General Nicholson at this period joined us, and while endeavouring to induce the Men to renew the attempt was severely wounded, and finding that each effort only caused further loss without success, I finally drew off the Men and retired to the Cabul Gate. Brigadier Jones' Column joined us here, and I placed myself under the Brigadier's orders.

I have &c.

W. BROOKES,

*Captain, 15th Regiment.*

FROM

BRIGADIER WILLIAM JONES,

*Commanding 2nd Column,*

TO

MAJOR GENERAL WILSON,

*Commanding Field Force, Delhi.*

*Cabul Gate, Delhi, 17th September 1857.*

SIR,

<p>I have the honour to report that the 2nd Column, consisting of the Corps          H. M.'s 8th Regiment.          2nd Fusiliers          4th Sikh Regiment of Infantry.</p>	<p>as per margin, paraded, agreeably to order, on the morning of the 14th instant, and immediately moved down to the attack of the Water Bastion. The Column</p>
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was told off into a Storming Party, Supports, and Reserve. The former consisted of 75 Men of H. M.'s 8th Regiment, under the Command of Captain Baynes, and 75 Men of the 2nd Fusiliers, under the Command of Captain Hay, late 60th N. I.; the Supports of 175 Men of H. M.'s 8th Regiment, 75 Men of the 2nd Fusiliers, and 50 Men of the 4th Sikh Infantry.

Brigadier General Nicholson having communicated with me, we arranged that the 1st and 2nd Columns should move forward simultaneously, as soon as the skirmishers of the 60th Royal Rifles had covered our front. This having been done, the 2nd Column advanced through the breach in the most gallant manner, and took possession of the walls without the slightest check. The moment the Column entered the Treasury Garden, it turned to its right, and proceeded along the wall under the Ramparts as far as the Cabul Gate, where it established itself, having left a party in charge of the Mosaic Bastion, and thrown out Picquets in commanding positions along the right and left of the Canal.

One of the Enemy's Guns on the Cabul Gate was immediately turned upon the Lahore Gate, from which the Enemy were firing grape and round shot.

I cannot speak too highly of the conduct of the troops under my Command, and my best thanks are due to Lieutenant-Colonel Grested, Commanding H. M.'s 8th Regiment; to Captain Baynes, of the same Corps, who led the assault; to Captain Boyd, Commanding 2nd Fusiliers; and to Captain Rothney, Commanding the 4th Sikh Infantry; also to Lieutenant



Greathed, of the Engineers, who gallantly conducted the party carrying the ladders, until he was unfortunately wounded; and to Lieutenant Henderson, of that Corps, who was also wounded in the performance of the same dangerous duty.

I am also much indebted to my immediate Staff, Captain Burnside, H. M.'s 61st Regiment, my Brigade Major, and Lieut. Stoman, H. M.'s 61st Regiment, my Orderly Officer, who rendered me every assistance during the operations.

I have etc.,

WILLIAM JONES, *Brigadier,*  
*Commanding 2nd Column.*

FROM

COLONEL G. CAMPBELL,  
*Commanding H. M.'s 52nd Foot, and in*  
*Command of the 3rd Column of Assault.*

TO

THE ADJUTANT GENERAL OF THE ARMY.

*Delhi, 16th September 1857.*

Sir,

I have the honor to report, for the information of the Major General, the operations of the 3rd Column of Assault, which was under my Command, on the morning of the 14th instant.

It consisted of 240 of H. M.'s 52nd, 500 of the 1st Punjaub Infantry, and 260 of the Kumaon Battalion. On the order for the several Columns to advance, the Explosion Party at once proceeded towards the Cashmere Gate, upon which they advanced with the most fearless intrepidity. The Explosion was accomplished successfully; but I regret to say that out of the 7 brave Officers and Men who composed it, 5 of them fell. Immediately upon the report of the Explosion, the Storming Party, consisting of a Company of H. M.'s 52nd, under the Command of Captain Bayley, advanced with a cheer, and overcoming all resistance, speedily secured the Gateway. The supports, consisting of 50 Men of H. M.'s 52nd, 50 of the Kumaon Battalion, and 50 of the 1st Punjaub Infantry, followed the Storming Party at a distance of 50 yards. The entire Column having entered the Main Guard, and re-formed as speedily as possible, proceeded to carry out the orders issued by the Major General, *viz.*, to advance upon the Jumma Musjid, and, if possible, to occupy it as well as the Kotwallie. Before quitting the neighbourhood of the walls, some of the Enemy being still within the Water Bastion, I detached a party to clear it out, which was done at the point of the bayonet, the Enemy who escaped the bayonet jumping over the parapets on the river side, where they were destroyed. We cleared the adjoining Cutcherry compound, also the Houses in the neighbourhood, the Church, and the Gazelle Press compound. The Column carrying everything before

## *The Mutiny day by day.*

it without much opposition, I proceeded through the Cashmere Durwaza Bazar, marked out as our line of advance. Hearing that a Gun was placed in position bearing down the street, upon arriving at a point where the Gun could be seen, I detached a party to get to its rear, through a bye street; but before this party arrived at its point, the Gun was taken with a rush without loss, except Lieutenant Bradshaw, who, regardless of danger, received a discharge, which killed him on the spot. We proceeded without opposition through the Begum's Bagh. Upon arriving at the gate which opens on the Chandnee Chauk, the gate of the Dureeba was found to be shut. This difficulty, however, was speedily overcome through the good conduct of a native, Mohun Singh, a chuprassie, who, accompanied by 5 Men of the 52nd, volunteered to endeavour to open it. The Column then passed up the Dureeba without opposition, except from musketry from a few houses. Upon arriving at the turn which brings the Musjid into view, and at about 100 yards distant, the side arches were found to be bricked up, and the gate itself closed. It was too strong to be forced open without powder bags or Artillery, neither of which were with me—the former in consequence of the Engineer and his party having fallen, and the latter not having been able to enter the Cashmere Gate, as the bridge had been destroyed, and moreover the houses on each side the street were filled with the Enemy.

I remained at this point about half an hour, in the hopes of hearing of the successful advance of the other Column at the Lahore and Ajmere Gates. At the expiration of this period, many Men having fallen by the fire from the surrounding houses, I judged it expedient to fall back upon the Begum's Garden, which we held for at least an hour and a half under a heavy fire of musketry, grape and canister.

Captain Ramsay, of the Kumaon Battalion, who had diverged to the right from the Column and had been in possession of the Kotwalee for some time, here rejoined the Column. Having communicated with the Head Quarters and ascertained that the 1st and 2nd Columns had not advanced beyond the Cabul Gate, I fell back upon the Church.

The operations of the Column, I regret to say, were attended with considerable loss; but the number of those who fell I am at present unable to state.

It now becomes my duty to bring to the notice of the Major General the gallantry and good conduct of all the Troops concerned, more especially H. M.'s 52nd Light Infantry, who led the Column from first to last, and who, I consider, fully maintained its high reputation. The Officers to whom I am more particularly indebted are Lieutenant Salkeld, of the Engineers, who personally fastened the powder bags to the Gate, fixed the hose, and although fearfully wounded, contrived to hand to a Non-Commissioned Officer of the Sappers and Miners the light to fire the train; Lieutenant Home, of the Engineers, who also accompanied the Explosion party; Captain Bayley, H.M.'s 52nd, who Commanded and led the Storming Party,

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and who was unfortunately wounded approaching the Gate; Captain Cross H. M.'s 52nd, who Commanded the Supports; Major Vigors, who Commanded H. M.'s 52nd, Captain Ramsay, who Commanded the Kumaon Battalion; Lieutenant Nicholson who Commanded the 1st Punjaub Infantry and who, I regret to say, was wounded shortly after the entry was effected; Captain Synge, H. M.'s 52nd, who acted as my Brigade Major to the Column.

I have further the gratification of bringing to the especial notice of the Major General the invaluable assistance I received from Sir T. Metcalfe, who was at my side throughout the operations, and fearlessly guided me through many intricate streets and turnings to the Jumma Musjeed, traversing at least two-thirds of the City, and enabling me to avoid many dangers and difficulties.

It is difficult to select individuals from the Ranks, where all behaved so well; but I have no hesitation in specifying the following Non-Commissioned Officers and Soldiers as deserving of peculiar reward, *viz*—the Non-Commissioned Officers of the Sappers and Miners, who formed the Explosion Party; Bugler Robert Hawthorn, H. M.'s 52nd, who accompanied the Explosion Party and sounded the Signal to advance; No. 1104, Sergeant Major Streets, H. M.'s 52nd, whose gallantry and good conduct was conspicuous up to the time he was severely wounded; No. 2764, L. Corporal Henry Smith, H. M.'s 52nd, who carried away a wounded comrade under a heavy fire of grape and musketry in the Chaudnee Chowk; No. 1836, L. Corporal William Taylor, H. M.'s 52nd whose conduct was conspicuous throughout the operations.

I have &c.,

G. CAMPBELL, Colonel,

*Comdg. H. M.'s 52nd and the Column of Assault.*

I am unable to state the names of the Non-Commissioned Officers of the Sappers and Miners who were with the Explosion Party.

FROM

BRIGADIER J. LONGFIELD,

*Comdg. Reserve Column,*

TO

THE DEPY. ASST. ADJUTANT GENERAL,

*Field Force Delhi.*

*Delhi, 17th September 1857.*

Sir,

I have the honor to report, for the information of the Major General

	<i>Rank and File.</i>	
H. M.'s 60th Rifles	.. 200	Commanding the Field Force, that in
.. .. 61st Regt.	.. 250	accordance to orders received, I took
Belooch Battalion	.. 200	
4th Punjaub Infantry	.. 550	
Jheend Force	.. 200	the Command of the Reserve Column, as
	1,400	

per margin, at  $\frac{1}{2}$  past 3 o'clock the morning of the 14th Instant.

### *The Mutiny day by day.*

The whole of H. M.'s 60th Rifles, Commanded by Lieut.-Colonel Jones, were detached for the purpose of covering the three Attacking Columns.

The Belooch Battalion, under Command of Lieut.-Colonel Farquhar, were, according to orders, detached to the advanced Batteries.

When about two-thirds of the way from the Camp to the Cashmere Gate, I received orders to re-inforce the Attacking Column, H. M.'s 61st Regiment, under Command of Lieut.-Colonel Deacon, and the Right Wing of the 4th Punjaub Infantry, under Command of Capt. Wilde, were sent forward.

The remainder of the Reserve Column, namely, the Left Wing of the 4th Punjaub Infantry, and the Jheend Force, under Command of Lieut.-Colonel Dunsford, then proceeded, the attack on the Cashmere Gate being successful.

The Jheend Force occupied the Cashmere Gate and the Main Guard.

The 4th Punjaub assembled at the Church and formed part of a Column of Attack on the College and grounds.

A party of H. M.'s 60th Rifles and the 4th Punjaub Infantry had already compelled the Enemy to withdraw the Gun they had placed at the gate of the College Compound. Captain Wilde then charged up to the House and gained the building with a loss of 3 Sepoys and two Native Officers killed and 22 Sepoys wounded.

The Belooch Battalion were directed to re-inforce Major Reid's Column, and subsequently took post at the College.

H. M.'s 60th Rifles, on re-joining the Reserve, proceeded to Ahmed Ali Khan's House.

H. M.'s 61st Regiment, under Command of Lieut.-Colonel Deacon, which had been already detached to support the Attacking Column, proceeded to the Cabul Gate. A return of the casualties that took place has been already forwarded.

I have a great deal of pleasure in stating that I received every assistance and support from the Commanding Officers, namely, Lieut.-Colonel Jones, H. M.'s 60th Rifles; Lieut.-Colonel Deacon, H. M.'s 61st Regiment; Lieut.-Colonel Farquhar, Belooch Battalion; Lieut.-Colonel Dunsford, Jheend Force; and Captain Wilde, 4th Punjaub Infantry.

Capt. Nicoll, Major of Brigade, and Capt. Campbell, 2nd Fusiliers, my Orderly Officer, rendered me every assistance in their power.

I have ac.,

J. LONGFIELD, *Brigadier,*

*Commanding Reserve Column.*

## *The Mutiny day by day.*

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To

MAJOR W. S. EWART,  
*Deputy A. A. General, Camp.*

*Delhi, 17th September 1857.*

Sir,

At dawn on the 14th September, the Column of Attack on Kishengunge

50 Men 60th Rifles.  
200 Men Sirmoor Battn.  
160 Men 1st Fusiliers.  
200 Guides.  
25 Coke Corps.  
65 Kumaon Battn.  
80 H. M.'s 61st Regt.

in the order and strength as per margin

was drawn up at the Subzee Mundee

Serai, under Command of Major Reid.

789 TOTAL.

The Jummoo Contingent commenced the attack before our Artillery had arrived, and Major Reid, wishing to support the attack, moved down the road in a Column of fours covered by 25 riflemen in skirmishing order.

The Enemy opened fire from the Bridge over the canal, and from behind walls, and the loopholed Serai of Kishengunge. Major Reid fell wounded in the head. The fall of their gallant leader checked the advance of the Goorkahs. The Fusiliers came to the front at the double, led by Captain Wriford.

The rush of the Rifles and Fusiliers placed them for a moment in possession of the breastwork at the end of the Serai; but those Men, unsupported, were unable to maintain the position under the heavy flanking fire to which they were exposed.

The Native Troops lined a Garden to the right of the road, and Lieutenant R. H. Shebbear, whose gallantry in this trying affair was the admiration of every one, with a few of the Guides and some Europeans, took possession of a Mosque. Every effort was made here to re-form the Troops, and charge the enemy's position, but without success, though many Officers sacrificed themselves in the attempt.

As I observed Columns of the Enemy's Horse and Foot taking ground to our right, and as I saw they were in great force to our front and left flank, I considered the object of the attack so far gained in having directed the attention of the enemy from the main point of attack. Fearing also that the Enemy's great strength might encourage him to attack our Batteries on the hill, I thought it right, as I had succeeded to the Command on the fall of Major Reid, to re-occupy the position from which we had been withdrawn. This was accomplished with little further loss, under cover of the Crow's Nest Battery, which fired shrapnell a few feet over our heads, and with the most admirable precision and fatal effect to the enemy.

This Battery was commanded by Lieutenant H. I. Evans, of the Artillery.

I cannot close this report without mentioning the noble way in which two Officers and one Sergeant fell in the attack. Captain G. G. McBarnet, attached to the 1st Bengal Fusiliers, died at the head of his Men at the first

## ***The Mutiny day by day.***

rush, and Lieutenant A. W. Murray, of the Guides, was killed while gallantly seconding his immediate Superior Lieutenant Shebbeare, who was himself struck by two balls.

I am much disappointed in learning that Sergeant Dunleary, of the Fusiliers, a Man whose conduct was conspicuous throughout, was killed in the Field.

Annexed is a statement of our loss, which, I regret to say, has been very heavy.

I have etc.,

D. D. MUTER, *Captain,*

*H. M.'s 1st Battn. 60th Royal Rifles.*

FROM

CAPTAIN R. C. LAWRENCE,

*In Political Charge, Jummoo Auxiliary Force,*

*Camp Delhi, 22nd September 1857.*

Sir,

I have the honor to report, for the information of the Major General Commanding the Delhi Field Force, the operations of the Kissengunj Column of Assault on the morning by the 14th instant subsequent to Major Reid being wounded.

2. On assuming Command of the Column, I found the different detachments of which it was composed so broken and disorganised by the heavy fire of the Enemy, that it was impossible to form them up in broken ground and under a severe fire to renew the attack on the Kissengunj Batteries. All I could effect was to keep the Enemy in check, which was done in the course of an hour without losing ground in the expectation of the arrival of Artillery, for which Major Reid had made a requisition previous to his being wounded. This aid did not arrive. The enemy appeared in large numbers on our right flank. I was apprehensive that they might get into our rear and endanger the safety of the line of Batteries below Hindoo Rao's House and of the Camp itself. I therefore directed the troops to retire, which they did, leisurely and in as good order as the nature of the ground would permit, keeping up a heavy fire on the Enemy. I then strengthened the Subzee Mundee Piquet, and directed the occupation of the Batteries above alluded to by detachments from the Column.

3. The Jummoo Troops detached, under the Command of Captain Dwyer, for the occupation of the Redgah, met with unexpected opposition and were totally unsuccessful. This circumstance added much to the difficulties under which the main Column laboured, enabling the Enemy to advance on its right flank and endanger its rear, and more particularly the safety of the Subzee Mundee Picquet, which was hotly pressed. Four six-pounder Guns belonging to the Cashmere Troops detached under Captain Dwyer were, I regret to say, captured by the Enemy. The circumstances under which this misfortune occurred did not come under my personal observation. I therefore called upon Captain Dwyer for a report, which I herewith forward in original for submission to the Major General. I concur

with Captain Dwyer in considering that the Detachment under his Command was inadequate to oppose the force brought against it.

4. As blame may be attached to the Jummoo Troops for the loss of their Guns, I feel bound to state my opinion that the portion of them attached to the main Column behaved as well as could be expected; when tried and experienced soldiers, both European and Native, were unsuccessful, what could be looked for from undisciplined and ill-armed men such as composed the Jummoo Contingent.

5. The loss sustained by this force on the 14th instant, viz., 22 killed and 67 wounded, which has been already reported to Major General Wilson, shows that they shared in the dangers and difficulties of the day.

6. Major General Wilson is well aware of the strength of the position which was held by the Enemy at Kissengunj, and of the nature of the ground over which the attacking force had to move on the morning in question. The Enemy were prepared in large numbers for an attack on their position. They had evidently received intimation that such was intended. After the attack commenced, they received considerable reinforcements from the City. Under these circumstances, I look with confidence to the Major General attaching no blame to the Troops engaged in this unsuccessful affair.

FROM

CAPTAIN H. A. DWYER,

*59th Native Infantry,*

*Attached to the Cashmere Force,*

*Camp Delhi, 22nd September 1857.*

Sir,

I have the honour to report for your information that on the morning of the 14th instant I proceeded, in accordance with the instructions I received, with four hundred men and four Guns of the Cashmere Force towards the Eedgah for the purpose to occupying and holding it.

The road was most difficult for Artillery, and to enable the Guns to get into the Rohtuck pucca road, which leads to the Eedgah, a portion of stone wall had to be levelled.

The noise, I believe, prepared the Enemy to receive us, as on reaching the road we were attacked by about two thousand men, who lined all the walls on the right hand side of the road.

We immediately opened fire with four Guns and some Zambooraks, and continued to fire for about three-fourths of an hour. We had not been firing long when the Kissengunge Battery fired into us from the left, and finding that we were getting outflanked, and that the Enemy did not appear to be suffering from our fire, owing to the protection of stone walls and jungle, I ordered an advance in view to effect an entrance into the Eedgah if possible.

***The Mutiny day by day.***

This advance, I am sorry to say, was not effected, notwithstanding the utmost exertions on the part of Lieutenant Tennant of the Engineers, Lieutenants Graham and Manderson, and myself. A small body of Infantry could not be collected to support the Guns, as the whole of it had, almost from the commencement, proceeded to skirmish in very extended order, contrary to my repeated orders.

On the order for the Guns to limber up being given, no horses could be got; for while the Guns were being worked the horses had been made over to grass-cutters, who took most of them away altogether; five or six horses I saw killed; the rest were never brought back, and I was informed that they also had been killed.

The attempt to secure the Hedgah was, I regret to say, a complete failure; but it appears to me that the force I had was quite inadequate to effect that object.

A body of one hundred Mounted Police, which accompanied the Detachment, behaved admirably and remained to the last. The ground however rendered it impossible for Cavalry to charge.

Ram Sing, one of my orderlies, killed a man by whom I was attacked, and is himself badly wounded; the other, Chundah Sing, had his horse killed.

FROM

CAPTAIN R. C. LAWRENCE,

*In Political charge Cashmere Auxiliary Force.*

TO

THE MILITARY SECRETARY,

LAHORE.

*Dated Delhi, 5th October 1857.*

Sir,

I have the honor to forward, for submission to the Chief Commissioner, a copy of my Report regarding the operations of the 4th Column of Attack on the City of Delhi on the morning of the 14th ultimo subsequent to my assuming the Command; and I will add what occurred previous to this period in order that the Chief Commissioner may be fully aware of the part taken by the Jummoo Troops in the assault on Delhi.

The Guns, Cavalry, with 400 Infantry, were directed to occupy an Hedgah in the neighbourhood of the Subzee Mundee, for which purpose I was ordered to detach them at 4 a.m. of the 14th ultimo, whilst 800 Infantry were directed to join the 4th Column of Assault at the Subzee Mundee Picquet, half an hour later.

Both parties left Camp at the hours specified; Captain Dwyer with Lieutenants Graham and Manderson proceeded with the one destined to



occupy the Redgah; myself and Captain Mocatta with that which was directed to join the 4th Column. Captain Dwyer's proceedings are detailed in the annexed copy of his Report. The 4th Column, under the Command of Major Reid, remained halted at the Subzee Mundeé Picquet until near sunrise. On advancing it was almost immediately met by a heavy fire from the Enemy, who had been lying concealed behind walls &c.

The leading Column was repulsed.

Major Reid was wounded and went to the rear. As the next Senior Officer, I immediately proceeded to the head of the Column, leaving Captain Mocatta to bring on the Jummoo Troops, As described in my Report to Major General Wilson, I found the leading detachments of the different Regiments, composing the Column, in the utmost confusion; a great portion of them had entirely broken away to the right, and were shut out from view in the jungle.

Such as remained were chiefly of the two Goorkha Battalions; the Guides and a very few Europeans were mingled together; and it was utterly impossible to reform them and renew the attack on the Batteries.

The Jummoo Troops seeing the confusion in front, and being themselves exposed to a heavy fire, could not be prevailed on to advance. They also broke into the jungle to the right, from which they commenced a heavy fire on the Enemy.

On retiring with the Goorkhas, Guides and a few Europeans, I found them thus engaged, and they did not leave the ground until ordered by me to do so. At this time the Enemy were within 50 paces of the position taken by the Jummoo men, and were beaten back by them.

I wish to bring these facts prominently to the notice of the Chief Commissioner, that he may be able to judge to what extent the failure of the 4th Column of Assault may be attributed to deficiencies on the part of the Jummoo Troops.

I feel confident that he will do justice to them, and to the European Officers engaged with them. I may here add that I attribute the fact of the Jummoo Troops keeping together as they did, and not at once retiring when they saw our Europeans beaten back, to the unremitting exertions of Captain Mocatta, the only European Officer with them.

Without presuming to reflect upon the authorities by whom this attack was planned and organised, I consider myself called upon to give my opinion that its failure is mainly to be attributed to the defective organisation of the 4th Column, and to the total want of information as to the strength of the Enemy likely to be opposed to it. In support of this opinion, I will merely state that the 4th Column, whose duty it was to take two if not three Batteries situated within separate walled enclosures, most difficult of access, and defended by large bodies of well-trained soldiers, was composed of 800 ill-disciplined, ill-armed men, and 800 of our own Troops,—this latter 800 not

### ***The Mutiny day by day.***

consisting of one Regiment, but being made up of detachments from seven different Regiments. Three Horse Artillery Guns were also attached to this Column, but there being only sufficient men to man one Gun, they could not be used.

Regarding the want of information as to the strength of the Enemy, I was informed by Major General Wilson and by Major Reid that there was little or no prospect of the party destined to occupy the Redgah meeting with serious opposition; on the contrary that it would probably be found empty. I was requested to caution Captain Dwyer against firing a shot, if possible to avoid it. When Captain Dwyer got near the Redgah, he found himself opposed to at least 2000 men.

Although the attack of the Column of which the Jummoo Troops formed a part failed in its object, it undoubtedly materially aided the successful assaulting Columns, by attracting the attention of thousands of the Enemy, who would otherwise have resisted their entry into the City.

#### GENERAL ORDERS.

By

HIS EXCELLENCY THE COMMANDER IN CHIEF.

*Adjutant General's Office, Calcutta, 10th December 1857.*

*No. 1529 of 1857.*—The Right Hon'ble the Governor General in Council is pleased to direct that the Despatches and Returns relating to the operations carried on during the siege of Delhi, and received by the Government at irregular intervals, should be made public.

These Despatches contain the Reports of the Officers Commanding in the first actions with the Mutineers at Ghazeeoodeen Nuggur, where the gallant conduct of Her Majesty's 60th Regiment, of the Carabineers, and of the Bengal Artillery, was conspicuous, and at Budlee ka Serai; as well as the accounts of other contests in which the British Troops have been engaged, always successfully, with the Enemy; each occasion furnishing examples of the undaunted courage, determination, and endurance by which the last crowning success was subsequently achieved.

The Governor General in Council has already recorded his gratitude to Major General Wilson, and the Officers and Men engaged in the final operation against the City. His Lordship

in Council now offers his thanks to those who specially distinguished themselves in the preceding operations, and to the Noble Army by which they were supported.

The warm acknowledgements of the Governor General in Council are due to Brigadier Hope Grant, C. B., and to Brigadier Showers, for their excellent services; and His Lordship in Council desires to express his high approbation of the zeal and good judgment displayed by Lieutenant-Colonel Custance, of the Carabineers, and Lieutenant-Colonel Yule, of the 9th Lancers, in the frequent engagements in which they have been opposed to the Enemy.

Lieutenant-Colonel Yule has unhappily fallen, and the Queen's Army has to deplore the loss of a brave and skilful Officer.

The thanks of the Government of India are due to Lieutenant-Colonel Greathed, Commanding Her Majesty's 8th Regiment; to Lieutenant-Colonel Deacon, Commanding Her Majesty's 61th Regiment; and to Lieutenant-Colonel Herbert, Commanding Her Majesty's 75th Regiment; as also to Colonel Welchman, who was at the head of the 1st Bengal European Fusiliers, and was severely wounded; and to Lieutenant-Colonel T. Seaton, C.B., of the 35th Regiment Native Infantry, to whose Command a Column was entrusted.

The example which has been set throughout these operations by the courageous and indefatigable exertions of Major Reid, Commanding the Sirmoor Battalion, is warmly acknowledged by the Governor General in Council.

Major Coke, of the Punjab Irregular Force, has added to his high and well earned reputation as one of the foremost Frontier Soldiers of India; and Lieutenant Hodson's good service at the head of the Irregular Horse merits much praise.

The thanks of the Government are eminently due to Lieutenant-Colonel Baird Smith, and the Corps of Engineers under his direction. Their labours have been unremitting and have deserved success.

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The readiness and coolness, as well as the gallantry evinced by Major Tombs, of the Bengal Artillery, on various occasions recorded in these papers, and the signal daring of Lieutenant Hills, who alone and unsupported, charged a body of the Enemy's Cavalry and saved his Battery, command the admiration of the Governor General in Council.

Major Scott and Captain Remington, of the Artillery, have well earned the acknowledgement of their services which the Governor General in Council now offers them.

His Lordship in Council desires to record his appreciation of the services of Lieutenant-Colonel Murray Mackenzie, of the Artillery, and of Major Jacob, of the 1st Bengal European Fusiliers, who died of the wounds received by them in these operations.

The General Officers who have held Command of the Army before Delhi, have brought to notice the ready assistance, at all times afforded to them, by that very distinguished Officer, Brigadier General Chamberlain, who, after the death of the lamented Colonel Chester on the field of Budlee ka Serai, was appointed to the Office of Adjutant General; by Captain Norman, whose services have been unremitting and most valuable, and by the Officers of the Adjutant General's Department; by Colonel Congreve, C. B., Acting Adjutant General of Her Majesty's Forces; by Lieutenant Colonel the Hon'ble R. Curzon, Acting Quarter Master General of Her Majesty's Forces; by Lieutenant Colonel Thomson, Deputy Commissary General, and the branch of the Service under his orders; by Lieutenant Colonel Young, Judge Advocate General, and his Department; and by the Officers of the Head Quarters, as well as of their own personal staff. To these Officers the Governor General in Council again expresses his hearty thanks for the good services which they have rendered, and which it will be his grateful duty to bring to the notice of the Hon'ble Court of Directors and of Her Majesty's Government.

During a portion of the time over which the Siege Operations extended, dating from the first arrival of the Army under the walls of Delhi, the Command was held by Major General Sir Henry Barnard, K. C. B. But this gallant Officer was not permitted to witness the final success of the undertaking confided to him, and of which his own brilliant victory at Budlee ka Serai was the worthy commencement. Struck down by sickness, he died at his post, giving his last energies to the discharge of his trust ; and the Governor General in Council cannot close this notice of the Campaign of Delhi without offering a tribute of sincere respect to the courage, constancy, and devotion to duty which marked the Command of Sir Henry Barnard.

FORT WILLIAM, 21ST JANUARY 1858.

No. 111 OF 1858.—In continuation of G. G. O. No. 1383, of the 8th November 1857, the Right Honorable the Governor General of India in Council has much satisfaction in publishing the following letters from Major General Sir A. Wilson, K. C. B., lately in command of the Delhi field force, bringing to notice the services of certain officers which were not referred to in his previous despatch, and to whom His Lordship in Council offers his warm acknowledgments of their excellent service :

No. 812.

FROM

MAJOR GENERAL A. WILSON,

*Comdt. of Arty. and late Comdg.*

*Delhi Field Force.*

TO

THE ASSISTANT ADJUTANT GENERAL,

OF THE ARMY,

*Head Quarters.*

*Head Quarters of Artillery, Meerut, 21st December 1857.*

SIR,

As an addenda to my despatch of the 22nd September last, I have the honor to request you will submit to His Excel-

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lency the Commander in Chief, for the purpose of being forwarded to Government, the name of Brevet Colonel J. Welchman, of the 1st European Bengal Fusiliers, among the names of those Officers who have done good service with the Force before Delhi, but were wounded previous to the assault. Colonel Welchman Commanded his Regiment from the commencement of operations, and led his men with cool and steady gallantry on several occasions, particularly in the action of Budlee Serai on the 8th ; again on the 20th and on the 23rd June, when he was severely wounded, when leading on his Regiment in the attack on the Subzee Munde.

His name was unintentionally, and through an oversight, omitted in my former despatch.

2. I beg also to forward a copy of a Report from Captain Muter, Her Majesty's 60th Royal Rifles, who succeeded to the Command of the 4th Column of Attack, bringing to notice the services of a Detachment of Mooltanee Horse under the Command of Lieutenant Lind, on the morning of the 14th September.

3. Major F. Gaitskell, Commanding the Artillery Brigade with the Field Force, has also requested that the name of Lieutenant G. A. Renny, Commanding the 5th Troop 1st Brigade Horse Artillery, may be inserted immediately after that of Captain Blunt, in the 8th paragraph of his despatch No. 20, of the 19th September ; the services of this Officer entitling him to this recognition, which was accidentally omitted.

I have etc.,

A. WILSON, *Major General,*  
*Comdt. of Arty. and late Comdg. Delhi Field Force.*

To

THE ASSISTANT ADJUTANT GENERAL,

*Delhi Field Force, Delhi,*

*Palace, Delhi, 11th December 1857.*

Sir,

I have the honor to enclose a report from Lieutenant Lind, detailing the operations of a force of 300 Sabres of the Mooltanee Horse under his

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Command, in conjunction with Major Reid's Column of Attack on Kishengunge, on the 14th September last.

I trust it is not too late to bring to the notice of Major General Wilson, then Commanding the Field Force, and His Excellency the Commander in Chief, the services of this Officer and his party.

The position in which the Column of Attack was placed was very critical, and had I been aware that this Cavalry was on our right flank, I would have felt much greater confidence. Lieutenant Lind's movements appear to me to have been very judicious, and I would not have failed to have brought this to the notice of the General in Command, had I been earlier acquainted with the circumstances.

I have &c.,

D. D. MUTER,

*H. M.'s 1st Batta. 60th Royal Rifles.*

To

CAPTAIN MUTER,

*Her Majesty's 60th Rifles.*

*Camp Gohana, Rohtuck District, 8th December 1857.*

Sir,

Having omitted at the time to send in a report after the fight at Kishengunge on the 14th September last, I would request the favour of your forwarding this letter to the Adjutant General of the Army, in order that, if possible, the Mooltanee Cavalry may appear in the Gazette as engaged. At 3 A.M. of the 14th September, Brigadier General Nicholson directed me to proceed to Hindoo Rao's with 300 Sabres of the Mooltanee Cavalry, and to place myself under Major Reid's orders. Major Reid ordered me to go to the Subzee Mundee and await further orders there. In the Subzee Mundee I found 2 Horse Artillery Guns and a Regiment of Cashmeerees. These latter were soon engaged, and left my front open, when I proceeded along the road towards the Kishengunge. I found no ground for Cavalry to act on, and lost a few men and horses killed and wounded. An alarm was now raised, that the Enemy had got into our rear, so I returned up the Subzee Mundee and drove out some Sepoys who had got into the street and were preparing to take possession of the houses. I was then returning to my former position, when the Guide Cavalry (who had mistaken my men from their white dresses to be the Enemy) were sent to charge me. By the advice of the Officer Commanding the Guides, and seeing that the 2 Horse Artillery Guns before mentioned had limbered up and were returning to the Subzee Mundee, I withdrew my Cavalry into the plain, between the Mound and the Subzee Mundee Picquet, where I got ground to act on and could prevent the Enemy's Cavalry from coming down on our rear, should they have attempted it. Whilst here, Colonel Dennis, Her Majesty's 52nd Light Infantry, sent me an order to retire on the "Fukeer's Tukea," and to remain

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as a support to 4 Horse Artillery Guns at that post, which I obeyed, and was employed on that duty till the Guns were withdrawn on the 20th September.

2. I annex a return of my loss in killed and wounded.

I have &c.,

J. B. LIND, *Lieutenant,*  
*Commanding Mooltanee Cavalry.*

No. 8.

FROM

MAJOR GENERAL A. WILSON,  
*Comdt. of Artillery and late Comdg., Delhi Field Force.*

TO

THE DEPUTY ADJUTANT GENERAL OF THE ARMY,  
*Head Quarters Camp.*

*Head Quarters of Artillery, Meerut, 5th January 1858.*

Sir,

I have the honour to forward, for submission to His Excellency the Commander in Chief, copy of a letter No. 27, dated 3rd October last, from Major F. Gaitskell, Commanding the Artillery Brigade with the Delhi Field Force, transmitting a Despatch of the 1st idem from Major J. Brind, bringing to notice the services performed by the Foot Artillery under his Command, during the operations against the City of Delhi.

2. These letters reached me too late, I regret to say, to accompany my Despatches detailing the assault and capture of that place, and have subsequently been delayed owing to my having been absent on medical certificate. They bear, however, such honorable testimony to the admirable services of Major J. Brind, and those under his Command, that I trust His Excellency will be pleased to forward them to the Right Honourable the Governor General in Council, with the expression of my hope that they may be published in continuation of my previous Despatches.

I have &c.,

A. WILSON, *Major General.*



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No. 27.

To

THE ASSISTANT ADJUTANT GENERAL,

*Delhi,*

*Delhi, 3rd October 1857.*

Sir,

I have great pleasure in forwarding, for submission to the Major General Commanding the Regiment, the accompanying excellent Report received by me from Major J. Brind, Commanding the Foot Artillery of this Force, bringing to notice the services of that branch from the time that he took Command (26th June 1857) until the more active operations of the siege commenced, embracing a period of 2½ months, during which the Foot Artillery were in constant employment and undergoing the severest daily exposure.

2. The services of the Officers and Men under his Command are so well and strongly brought to notice by Major Brind, that I can only record my entire concurrence in his Report. No Officers or Soldiers could have conducted themselves in a more zealous or gallant manner than did those of the Foot Artillery, or in a manner more likely to add fresh lustre to the Regiment.

3. But in thus doing duty to such gallant soldiers, I should consider I was neglecting a most important and a most agreeable duty, were I to abstain from bringing prominently to the notice of the Major General Commanding the Regiment, the valuable and distinguished services of Major Brind himself, while in Command of the Foot Artillery. From first to last, his energy and activity have been unceasing, ever foremost where danger was greatest, encouraging both Officers and Men by his noble example, and whilst leading on those under him to every success in the field, he, at the same time, never ceased to care for their wants and necessities in Camp.

The manner in which Major Brind exercised, without one hour's intermission, his Command of No. 1 Siege Battery, during the last eight days of the siege, have already been brought to the notice of the Major General Commanding the Force, and I trust this last distinguished period of his Command (previous to the assault) will only tend the more surely to gain for Major Brind those honors which he so richly merits.

I have etc.,

F. GAITSKELL, *Major,*

*Commanding Artillery Brigade.*

To

LIEUTENANT FRITH, H. A.,

*Major of Brigade, Artillery Brigade,*

*Delhi, 1st October 1857.*

Sir,

On the close of active operations connected with the Siege of Delhi, I feel it a duty I owe to Officers and Men belonging to or doing duty with

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the Foot Artillery which I have Commanded since the 26th June, to bring their conduct to the notice of Major General A. Wilson, Commandant of Artillery, and holding the Chief Command of this victorious Army.

It would be superfluous in me to attempt any detailed report of the unceasing labors, exposure to sun and wet, and dangers from the constant presence of an active and treacherous Enemy, to which the Foot Artillery was unavoidably exposed during the three months I have had the privilege of commanding it. As the Commanding Officer is fully aware of the peculiar circumstances under which this branch of the Army, especially, has been placed, gathered from various stations and sent down in small detachments (with little more than the clothes on their backs) by bullock train, the Foot Artillery were called upon by the exigencies of the service to endure hardship beyond others. No soldiers could have gone through the trials and dangers their Country's cause imposed upon them in a more cheerful spirit, or with braver hearts, than did the Bengal Artillery attached to the Army of Delhi during this eventful period; and without disparagement to the mounted portion of the Regiment, of whose noble conduct, as passing under my observation during eight days and nights of constant danger and laborious exertion in No. 1 Breaching Battery, it has been my proud honor to report, I consider it an imperative duty to thus publicly express my admiration of Officers and Men who have made my part one of honor and comparative ease.

If I have performed my duty to the satisfaction of Major General Wilson, it is mainly owing to the favourable position in which I have been placed, and the health and strength with which I have been blessed.

Major Scott and Captain Bouchier's Batteries, though forming a portion of my Command, have not come so directly under my observation, owing to the detached nature of their duties; but I have much gratification in attesting to the satisfactory state of discipline and efficiency of the two Batteries, which justified me in feeling and placing the fullest confidence in these two Officers, and merely requesting that they would promptly carry out any orders received from the authorities, referring to me only when my support or assistance was required. Major Scott and his Command, by gallant services on the field of battle, had established a reputation previous to my arrival at Delhi, which, though fully appreciating and rejoicing in, it is not in my province to allude to in this Report. Since leaving Delhi with the Movable Column, Captain Bouchier and the Officers and Men connected with him, have had an opportunity of proving themselves worthy members of the Bengal Artillery.

I take this opportunity of remarking that the sluggish and generally unsatisfactory way in which the Sikh Artillery, belonging more especially to the 2nd and 3rd Companies, performed their duties previously to the 7th of September, has been more than blotted out by the zeal and bravery evinced by this branch of our Regiment during the siege. Some, and amongst them are Commissioned and Non-Commissioned Officers, are, from various defects,

unfit for the Service, and as Sir John Lawrence recommended the step, I would suggest that these men be returned to their homes *via* Lahore, and the distinguished be promoted in their stead. This would leave us two effective Companies.

In expressing the high satisfaction I experienced in observing the zealous performance of duty on the part of the Foot Artillery with the Army of Delhi, I consider it incumbent on me to bring to the special notice of Major General Wilson the Officers and Men of Her Majesty's 9th Lancers, who were employed in the Batteries as Artillery-men, under my Command and observation. Lieutenants Evans and Blair are deserving of honorable mention for the zealous and cheerful performance of their duties. The coolness and bravery of Officers and Men in situations of extreme danger, whilst engaged in a novel duty, called forth the admiration of all who witnessed, and especially of those who had the satisfaction of serving with them.

Lieutenant Boileau, of Her Majesty's 61st Foot, also distinguished himself most honorably, previously to his gallant services in No. I Breaching Battery, as did a most deserving and brave young Officer, Lieutenant Ward, of the late 5th Regiment Native Infantry, during and previous to the assault.

The following are the Artillery Officers doing duty under my Command, whose zeal, ability, and coolness in situations of great danger, called forth my special approbation and thanks:

Lieutenant A. H. Heath,  
" J. Fulton,  
" Sir W. Hamilton,  
" E. L. Earle,  
" R. T. Hare,  
" R. deL. St. George,  
" H. Chichester,  
" D. S. Pemberton, and

Lieutenant Simon Budd, Riding Master, 1st Brigade Horse Artillery, whose long and faithful services are on record at Regimental Headquarters, and Lieutenant T. E. Dickins, who was killed in action whilst serving his Gun in a most effective and gallant way.

It is now my melancholy task to notice most prominently one of our bravest and brightest ornaments, who has run his course, Captain Robert Pagan, the able and gallant Officer who fell mortally wounded on the 12th ultimo, after winning the honest admiration of all. Lieutenant Hildebrand, killed in the Battery I had the honor to Command, as shown in my report of the services of No. I Breaching Battery, was a zealous and gallant Officer.

I have &c.,

JAMES BRIND, *Major,*

*Commanding Foot Artillery with Army of Delhi.*

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FROM

MAJOR GENERAL A. WILSON,

*Late Commanding Delhi Field Force,*

To

THE DEPUTY ADJUTANT GENERAL OF THE ARMY,

*Head Quarters Camp.   ▲**Meerut, 5th January 1858.*

Sir,

Through an oversight, which I much regret, the name of Surgeon I. C. Brown, in medical charge of the 3rd Brigade Horse Artillery, was omitted in my Despatch dated 22nd September last, as one of those Officers of the Medical Branch entitled to particular mention for the zeal and ability with which they discharged their important duties during the Operations before Delhi.

2. In justice to this deserving Officer, I trust His Excellency the Commander in Chief will be pleased to forward to the Right Honorable the Governor General in Council my request that his name may be inserted immediately after that of Superintending Surgeon C. Mackinnou, M. D., in the Despatch adverted to.

I have &amp;c.,

A. WILSON, *Major General,**Late Commanding Delhi Field Force.*



***The Mutiny day by day.***

FROM

MAJOR GENERAL A. WILSON,

*Late Commanding Delhi Field Force,*

To

THE DEPUTY ADJUTANT GENERAL OF THE ARMY,

*Head Quarters Camp.**Meerut, 5th January 1858.*

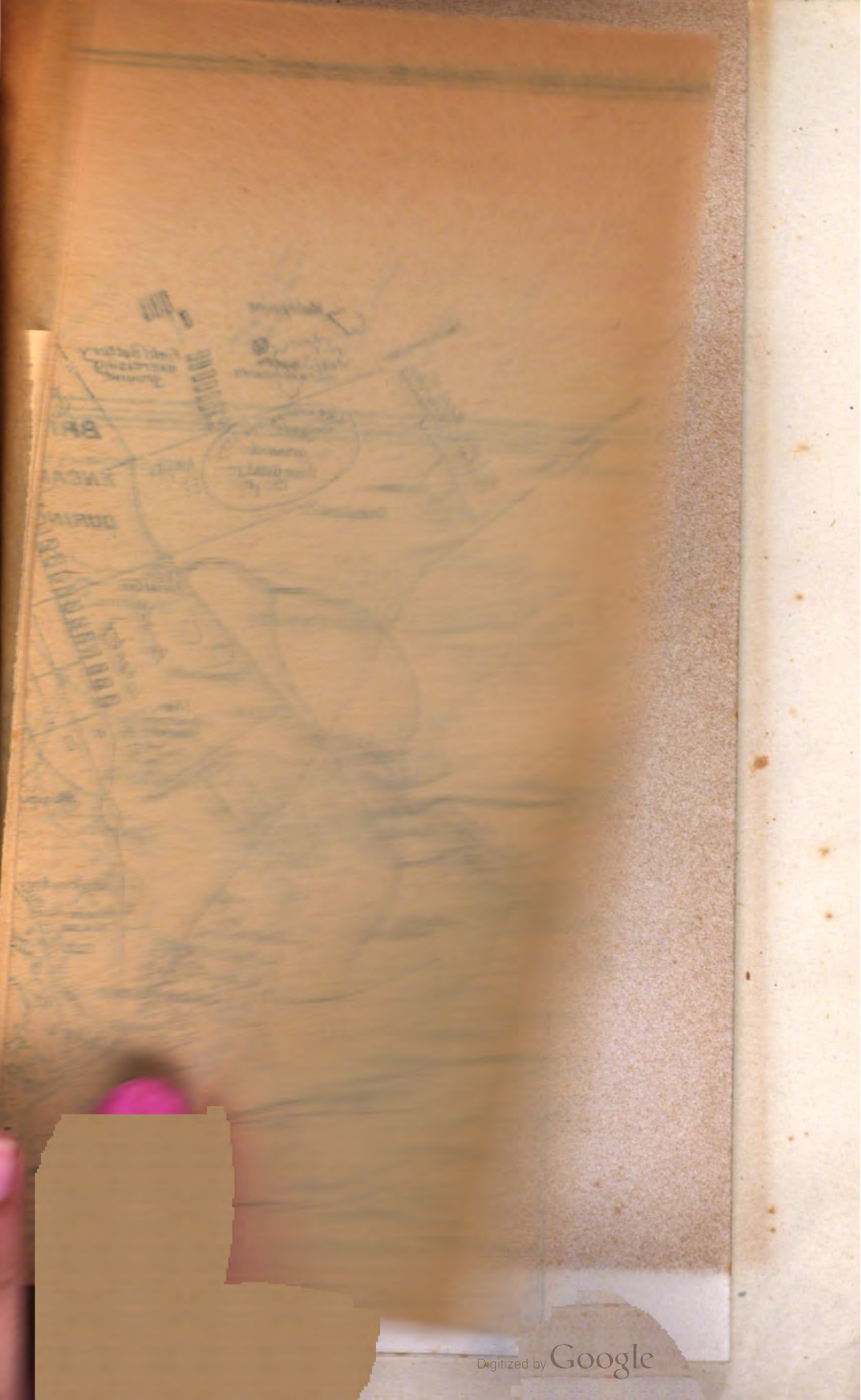
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## **ECONOMY AS ILLUSTRATED BY SALVAGE OPERATIONS IN FRANCE DURING THE LATE WAR.**

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*Lecture by Lieutenant-Colonel R. H. Palin, O. B. E., Cantonment Magistrates' Department (late Assistant Controller of Salvage, G. H. Q., France) recently given at Peshawar District Headquarters.*

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"Financial Stringency" and "The urgent need for Economy" are watch-words which to-day are being prominently insisted on in India by Civil and Military authorities alike. During the late war the demands of our armies for supplies of all natures coupled with the activities of enemy submarines compelled our people at Home to practise economies whether they liked them or not. Apart from this necessity the public realized that the war was essentially a war of national endurance and that everything that was done to conserve our resources was helping towards victory and peace.

We began the war with a small army supported by a large industrial population, a great mercantile marine, immense national wealth, and the produce of the world; while during the closing months of the war we had a huge army, supported by a depleted industrial population, a mercantile marine working under considerable difficulties, and resources of money and material that had been severely drained.

WASTE at such a crisis in our national career was not merely to be avoided but was both criminal and dangerous.

Things were different in India. The country was neither a war area like France; nor next door to one like England. Meat, milk, sugar, tea, and butter remained in their usual abundance, and, save for a shortage of imported articles of food, the effect of the war on food supplies was almost negligible. It is not a matter for surprise therefore that during the war the urgent necessity for economy was never realized in its true perspective, and it is difficult to appreciate now that the blessings of an alleged peace have fallen on the land.

### ***Economy during the War.***

The coming of peace has not greatly altered matters, and, though supplies are now abundant at Home, the heavy burden of taxation, the enormous rise in prices and industrial unrest make it incumbent on the nation to continue to practise economy in every direction; and what is the case in England is the case in India.

It is therefore with the view to interesting the troops in the Peshawar District in the necessity for economy that I have been asked to speak to you today on the on the Salvage of Material during the war in France, which, in conjunction with the Salvage organization in England under the War Office and the National Salvage Campaign amongst the civil population, saved many millions of pounds to the Treasury and lightened considerably the burden of our national debt.

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*"What have you salvaged to-day?"* During the latter part of the war in France this question stared one in the face from the tail board of every lorry as, after plentifully be-spattering you with mud, it clattered and banged on its way.

Before going to France, I had no very clear idea of what salvage meant: if I had thought about it at all I had connected it only with ship-wrecks, or the long red ladders and brightly polished helmets of the Salvage Corps of the London Fire Brigade. I had the privilege in France of learning something of what salvage means with an army in the field and I will endeavour to give you an outline of the organization that was built up for the collection of derelict material, and how this material was subsequently disposed of. To give you some idea of the immense quantities of material that were dealt with, let me tell you that the Department of the Controller of Salvage at General Headquarters estimated the value of the material lying on the ground in the forward areas alone at the close of hostilities at one million pounds sterling per mile of front.

In the beginning of the war there was no special organization for salvage with our Army, and comparatively little stress was laid on work of this nature. This was mainly due to the general feeling both at Home and with the troops that the war would not be a long one, and that the best of everything and plenty of it was the thing for the men at the front.

This attitude did not continue long—and the initial steps to remedy matters were taken within the first twelve months of the war—indeed, as soon as it was realised that it was to be a lengthy one, and that it would strain the national resources of material to the utmost.

Even before that the need for economy was anticipated; for as early as September 1914, a month after landing in France, the Commander-in-Chief issued the following general Routine Order:—

“The Commander-in-Chief regrets to learn that large quantities of ammunition, clothing and equipment have been abandoned by the troops merely to avoid the inconvenience of carrying them.

It has also been reported that supplies of clothing, etc., sent up in response to urgent demands have been refused by units when offered to them, with the result that the stores have either been abandoned, or, if left with the Supply Column, have had to be taken back to the railhead and sent down again to the base.

Resources at home will be strained to the utmost to meet the legitimate demands of the troops during the campaign, and it is certain that any unnecessary waste at the present time will entail a shortage of stocks which will be seriously felt when the weather gets colder.

Under these circumstances, it is imperative that stringent measures should be taken to stop waste, and

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to ensure the collection and transfer to the depots on the Line of Communication of all surplus equipment and clothing" (11-9-14.)

Four months later we find him issuing the following order:—

"Return of Empty Petrol Tins. It is observed that the proportion of empty petrol tins returned to the Base does not exceed 42 per cent. It is of the greatest importance that all empties should be returned as there may be a shortage of them for refilling in England." (6-1-15.)

**Shortage indeed!** When one recollects that two train loads of tins of petrol, averaging 60 trucks each—the one from Calais and the other from Rouen, left daily for the forward railheads, and that the price of a petrol tin was towards the end of the war somewhere in the region of two shillings and four pence—a percentage of returned empties of only 42 would have been a heavy item of expenditure, had it been allowed to continue.

Fortunately long before 1918 matters in this respect had vastly improved. Efforts at the prevention of waste were not however confined to a few general Routine Orders, and individual attempts to collect and utilize abandoned or re-useable material were also made by certain units and departments.

There was however at first no co-ordinated effort, and the Army had not opened its eyes to the waste that was going on all round it. In 1915 matters had so far advanced that *Divisional Salvage Companies* were formed, but under local arrangements and without official recognition as independent units. They were largely composed of a rather varying personnel drawn from the temporarily unfit or under-aged men of the Infantry Battalions. Their duties consisted in the searching of abandoned billets, and of the zone behind the trenches

for derelict material of all description. At the same time it was impressed on the ordinary troops that it was their duty to prevent material becoming derelict where that could be avoided, and to collect salvage material from the trench zone into convenient collecting stations whence it would be removed by the Salvage Company.

In 1917 the formation of Employment Companies gave this Salvage personnel a more definite status, although still without creating independent Salvage units.

One officer and 51 other ranks of a Divisional Employment Company formed the authorized quota for salvage work, and one officer and 44 other ranks from an Area Employment Company were allotted to each Corps Headquarters for similar duties. Eleven of the Corps Salvage men were supposed to be allotted to each Division while in the Corps, and the remainder worked in the Corps troops area or at the Corps Main Salvage dump. Nineteen men without an officer were similarly allotted from Area Employment Companies to the Headquarters of each Army.

This system left much to be desired. It marked a distinct advance however, and at least insured that all formations had some basis on which to build up a system of salvage in which all units could co-operate. On the Lines of Communication the matter was left entirely to units, two Ordnance officers being appointed to inspect and advise.

This executive organization for salvage work remained unchanged till the Autumn of 1918, when Salvage Sections of permanently allotted Labour Corps personnel were authorized.

Each of these was to consist of one officer and forty other ranks, and sections were to be allotted on the scale of one per division, one per corps and 18 as a G. H. Q. "Pool".

Such was the organization for the actual collection of salvage in the forward areas when hostilities ceased, and, if

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not ideal, may be regarded as the most effectual compromise when economy in material had to take second place after economy in man power.

Before proceeding to describe the work on the administrative side or at the Bases and in the various workshops and Departments to which Salvage was consigned after it left the front, I will endeavour to explain to you something of the actual work done by the executive Salvage units.

The system adopted for the recovery of salvage was based on the co-operation of two agents:—

- (1) The troops whose duty it is, following administrative orders, to collect and return to railhead through the normal channel of supply all unserviceable or surplus stores.
- (2) An organization-*viz*:—the executive Salvage units—to supplement the work of the troops by the collection of derelict material.

The object of salvage is that *nothing* that can be used shall go to waste, and that after its collection it must be disposed of by those channels through which it will be brought into use again with the least possible delay and to the best advantage.

Experience showed that this problem could best be solved by dividing it into two phases.—

- (1) Routine Salvage, *i.e.*, the collection and disposal of all material which had become derelict by reason of
  - (a) Normal wastage, which was continuous in all areas occupied by troops;
  - (b) Active operations.
- (2) Special Area Salvage.

This latter I will deal with later.

*Routine Salvage* depended for its success on the close co-operation of the troops.

It comprised

- (1) The collection of derelict material in Army and other areas occupied by the troops.
- (2) Sorting and, in conjunction with the departments concerned, the disposal of collected material.

The ground covered by "Routine Salvage" operations was divided into two zones:—

- (1) The zone of operations, *i.e.*, forward areas. -
- (2) The zone occupied by troops in camps and billets, *i.e.*, back areas and Lines of Communion.

The *Divisional Salvage Officer* was in charge of collecting salvage in the zone of operations, and, as the co-operation of units in collection and in provision of transport was of primary importance, he kept in close touch with all Officers Commanding Units in their respective areas.

In consultation with them he established "Salvage Receiving Stations" by the sides of light railways, roads, duck-boards or other avenues of communication. These were conspicuously marked with notice-boards, and in muddy or boggy country were provided with improvised receptacles for salvage made out of wire netting or sandbags.

It was impressed on the troops that it was their primary duty to see that no abandoned article was left derelict and no fit man or prisoner of war should be permitted to return from the trenches without bringing some salvaged article with him.

Whenever and wherever transport was available the salvage collected at the Salvage Receiving Stations was evacuated with all possible speed to a Divisional dump situated generally somewhere on a main road or light gauge railway.

Two systems were in vogue—one in which the Divisional Dump was the final collecting and receiving station before evacuation to the Base, the other where the contents of all Divisional Dumps were drawn into a Corps Main Salvage Dump, the

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Divisional Salvage dump being merely a preliminary sorting station. The advantage of the latter system was that the representatives with Corps Headquarters of the various departments, which controlled the supply of material to the troops, were in a better position to distribute amongst their divisions any serviceable articles or derelict stores which were collected, so reducing demands from the base, and automatically economizing the use of rail transport to and from the bases.

Main Salvage Dumps were always located at some suitable point on a light or broad gauge railway, such as an advanced railhead or broad-gauge transshipping station. These dumps were frequently models of systematic orderliness, even though many of them were at times exposed to shell-fire.

The vast number and complexity of the articles collected was astonishing. During the month of August 1918 the bulkiest articles that passed through salvage dumps included a "Trench Digger", an Observation Balloon" a "Motor Char-a-Banc" and a "Railway Engine." At one time the Dump of a Division in the vicinity of Ypres contained a huge pile of lead sheeting, which was part of the roof of the famous Cloth Hall; an analysis of the lead had shown it to be very highly impregnated with silver. Salvaged material was sorted and disposed into the three main categories of *Engineer* or *Ordnance Stores* and *Supplies*, and these again into fit for immediate re-issue, fit for re-issue after repair, or fit for produce or scrap.

The point of paramount importance was that everything should be dealt with promptly so as to bring it into use again with the least possible delay.

Every dump was fitted with an oil bath in which rifles and bayonets were cleaned as soon as received. Special personnel was detailed to deal with bombs and grenades. Finally everything that could not be immediately made use of in the forward areas was expeditiously despatched to the bases.



Such was the routine during periods of peaceful warfare and during such times the life of the Divisional Salvage Officer was that of a happy—comparatively happy—harvester.

During *offensive* operations the primary object of salvage was to collect perishable stores and those particular articles which were in constant demand at such a time to replace the wastage of battle.

Some of the most important articles—such as rifles and ammunition of all kinds—deteriorate with exposure; consequently rapidity of collection was necessary.

As soon as the situation permitted collection of material on the battlefield began. The Divisional Salvage Officer kept in touch with the course of operations so as to know where the most severe fighting had been, and consequently where the bulk of the salvage was likely to be.

The ground had to be reconnoitered in order that:—

- (1) Those places where salvage was in large quantities and could be easily collected were worked first;
- (2) the requisite labour allotted;
- (3) the best arrangements for evacuation made;
- (4) priority given to the more important articles.

It was generally found that the more important types of salvage were to be found in the zone of the infantry attack. Here the salvage was never localized to the extent it was in evacuated gun positions.

*After an advance* the Divisional Salvage Officer divided his area into suitable sub-areas and concentrated his labour upon them in rotation: he provided himself with a large scale map marking it off square by square as each was cleared.

Such is a brief outline of the work of salvage in the zone of operations. Salvage efficiency varied enormously in different Corps and depended to a very great extent on the personal interest of the 'Q.' Staff Officers.

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Despite the arduous nature of their task it was generally to an unfit officer that the duties of Divisional Salvage Officer were entrusted—though here and there Corps and Divisions were found who realized that the work could only be efficiently carried on by a fit man.

I have said that salvage efficiency varied enormously amongst different Corps. One famous Corps, for instance, had a high reputation for collecting salvage and this reputation they kept to the end of the war, undimmed by the rumours that were current that it was gained, not by their efforts on the battlefields or amongst billets when at rest, but by the more expeditious and simple method of raids on the dumps of their neighbouring Corps.

So much for the zone of operations.

The zone occupied by troops in camps and billets, *i.e.* back areas and areas on the Lines of Communication offered a much simpler problem.

Prior to the summer of 1917 little was done on the Lines of Communication in the way of organized salvage, but in that year the economic situation drew attention to the hitherto comparatively unnoticed source of potential salvage in this direction.

For purposes of administration the Lines of Communication area was already divided into smaller areas and the responsibility for salvage in each sub-area was therefore laid on the Area and Sub-area Commandant. At the various bases of the Army—Calais, Havre, Boulogne, and so on—the responsibility was vested in the Base Commandant. It was the duty of all Commandants and Town Majors to inspect all billets and camps in their areas, arrange for collection of material left behind and to notify the Headquarters concerned as to the size and position of such dumps, so that arrangements might be made for their removal and disposal.

They were enjoined to take particular notice of preventable waste and to report every case without delay to the Headquarters of the Corps or Army concerned or of the Lines of Communication, so that the responsible person might be called to account therefor.

Salvage dumps were located at suitable spots on the railway, and, as in the manner in the forward zone, all material that could not be put to immediate use was evacuated to the bases.

It was not however entirely in camps and billets that the salvage officer sought his spoil. The local French and Belgian inhabitants were keenly alive to the advantages of such articles as cardigans and boots, and found that macintosh capes were equally waterproof for British soldier or Allied civilian alike, and, in one case at any rate, that a wheeled stretcher formed an excellent combined bath-chair and handcart. All inhabitants were, therefore, warned to hand over to the civil authorities any British stores which came into their possession.

I have already mentioned that it was found that the problem of ensuring that nothing that could be made use of should be allowed to go to waste was best solved by dividing it into two phases—firstly, routine salvage in the zone of operations and on the Lines of Communication, and secondly, special area-salvage. This I will now describe.

The first battle of the Somme and the subsequent German retirement in the Spring of 1917 introduced a new factor into the situation. Behind the zone of operations there was left a vast devastated tract full of valuable military material, and strewn broadcast with the debris of war. To cope with this enormous mass of material a special organization had to be devised. A Senior Officer with a suitable staff was appointed and labour and transport allotted.

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The greater part of the work was technical and could only be satisfactorily directed and supervised by specially qualified officers and men.

The main object of the work was —

- (i) To recover timber and other materials which had been used in the construction of defensive positions, mine galleries etc.;
- (ii) to dismantle water and telegraph systems;
- (iii) to dismantle hutments.

Special personnel belonging to the various branches of the Service concerned with these forms of salvage were attached to the Special Area salvage organization to supply technical knowledge for the direction and supervision of these duties.

To illustrate this:—In the summer of 1917 an Indian Labour Company—comprised of Trans-frontier Pathans, Afridis, Mahsuds and others which had been recruited in the Peshawar District—was engaged near Airas in dismantling dug-outs in the old German line.

As most of you no doubt remember these dug-outs were not only deep—several going down to two and three levels—but were most elaborately and scientifically timbered. The work of the company was to extract this timber, which consisted of carefully sawn and dovetailed baulks of Swedish pine. The work was dangerous, as, if unskillfully carried out, a collapse of the roof of the dug-out might have buried the whole working party. Work was always commenced at the farthermost and lowest end of the dug-out and proceeded backwards to the entrance. Skilled labour was provided by miners from the Tunnelling Companies during their periods of rest, and these men did the actual extraction of each set of timber—while the work of hauling the timber up to the open and stacking it was done by the Labour Company,

The timber was constructed in frames—two standards 6ft. 3in. high and two cross-pieces, one at the foot the other overhead, each 3 ft. 3 in long—or a total of 19 feet of timber to each frame. They were all made of seasoned wood and had been brought ready sawn and dovetailed to the spot—a tribute to the thoroughness of the German preparations for war.

The price of such timber landed in France was at the time 9*d.* a running foot and as many as 900 sets were sometimes taken out of one dug-out in the course of a couple of days work. The price of 900 sets at 9*d.* a foot would be about £650, and when one thinks of the many hundreds of such dug-outs there were it helps one to realize the immense value of properly organized arrangements for bringing it into use. As a matter of fact the entire out-put of the Labour Companies in this particular area was immediately utilized in the preparation of our own dug-outs for that particular section of the Front line.

Close by where this work was going on was a little village, at that time the Headquarters of the 7th Corps. This village was found to be full of abandoned British Artillery ammunition and the Special Area Salvage Officer put a Labour Company to the work of salving it: the ammunition had been stacked in cellars and dug-outs many of which had collapsed under shell-fire: despite this, however, in 3 weeks' time ammunition to the value of £40,000 had been brought to light and transferred to Ammunition dumps and was ready for re-issue.

"Special Area Salvage" differed fundamentally from "Routine Salvage" in that it was:—

- (1) Carried out so far behind the battle line as to be practically free from interruption by the enemy.
- (2) The Labour and transport was specially allotted for the work and had no other duties,

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- (3) Except in the case of retirement the operations were unaffected by movements of troops and went on continuously till the work was done.

Work of immense value was done by the Special Area Salvage on the Somme battlefields during 1917-18.

It was still in progress when the German advance in March 1918 made continuance temporarily impossible except in one sub-area immediately to the south of Arras.

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I have now outlined the arrangements which experience in the war found the best for the collection of salvage and its disposal, either to meet the immediate requirements of the Army or to the bases for repair or utilization in one direction or another.

Early in 1918 it was decided that all these efforts required co-ordination and control. In the first place therefore Staff Captains for Salvage duties were appointed at the Headquarters of each Army and Corps. A similar officer was appointed to the Headquarters of the Lines of Communication.

In the second place, a Controller of Salvage was appointed at General Headquarters, with a Headquarters Staff. He was given a very wide brief in all matters relating to salvage and to the prevention of waste, but his main duties may be briefly described under three heads.

*In Army Areas* his function was to inspect the work carried out by formations, and to submit reports and recommendations to the Quartermaster-general, over *Special Area Salvage operations* he was given direct executive command and, as regards the *disposal of salvage at Base Depots*, the salvage control was to act as a clearing house between departments able to utilize each others' scrap, as a means of liaison with the Home Authorities as to the materials required in the Munition Factories in the United Kingdom, and as an agent for the sale in France of material not otherwise required.

Working under the Controller of Salvage were expert accountants to collect and tabulate in statistical form a record of the quantities of material salvaged, chemists to investigate methods of recovery of bye-products derived from salvage; metal-experts to advise on scrap metals of all kinds; experts to deal with the best way of disposing of defective or obsolete ammunition, bombs, hand-grenades, etc., both our own and those captured from our enemies. I say advisedly—enemies—for by this time the *Salvage Octopus* had extended its arms away down to Italy where our troops were fighting against the Austrians. Other Staff Officers were appointed whose duties were the inspection of Salvage work all over France and Flanders, and as Liaison Officers between the various departments.

## **Part II.**

We now come to the disposal of salvage at Base Depots and Ports. It would be impossible of course to give you anything but the merest outline of the work.

As the bulk of salvage arriving was Ordnance salvage, I will take that first and will give you a brief sketch of the work at Calais.

Trains averaging 60 to 80 trucks used to arrive daily at the Salvage Dépôt. A specially constructed station had been prepared with trained officers and labour to deal with it on its arrival. On one side of the station were sheds appropriately marked to receive such items which had to be conveyed to England and on the other those which could be dealt with in France.

Of the total amount received an average of 75 per cent consisted of repairable articles, 7 per cent brand new stores and 15 per cent scrap.

The arrival of a salvage train was a most interesting sight. Rifles, guns, bicycles, boots, vehicles, clothing, tents, helmets, equipment—a heterogeneous collection of every conceivable

article. Every train load seemed to disgorge some special article of interest. One day it would be a complete German cinemetograph; on another a German Field Periscope mounted on a sort of artillery carriage. As an illustration of the completeness with which areas were swept clear of salvage I will relate an incident which came within my personal knowledge. In the Autumn of 1917 the Commandant of a group of Labour Corps had set up in front of his temporary mess a very fine bronze model of a fox taken from a neighbouring chateau. His camp was a mile or so outside Bapaume on the Bapaume-Cambrai road. In the following Spring the German advance placed Bapaume well within the German lines. In July of that year I was watching the unloading of a salvage train at Havre, when out of one of the trucks came the bronze fox, minus half his head, which had been smashed by an enemy or British shell. He had otherwise managed to survive the German advance and had had the pleasure of being re-captured by his former friends and eventually found his way to the metal scrap heap of a French foundry.

I will now tell you how some of the articles were dealt with. Imagine a huge pile of seemingly hopelessly broken and rusted mess tins. These were first plunged into baths of caustic soda and hot water to remove grease and dirt, then into an acid tank which removed all rust, dipped in zinc chloride and then into molten tin, dried in sawdust and passed on to a regular regiment of tin-smiths for repairs. In this way an average of 2000 iron tins and 250 camp kettles were turned out daily and to the layman could not be distinguished from the brand new article.

Leather and web equipment, stained with mud and blood, torn and broken, was dealt with by a bevy of French girls. Any that had oil or blood stains on them were washed with caustic soda and soft soap by hand; they were then dried in a



especially constructed drying cylinder which whirled round at high speed and forced all moisture out of the material. Equipment which needed only brushing was dealt with by scores of electrically driven brushes also manipulated by French girls. The rivetting and stitching of damaged pieces—usually the work of skilled artisans—was also done by French girls.

Water-bottles on their arrival were stripped of their covers, and those that were in good order were re-covered ready for re-issue, and the old covers were converted into gloves for Labour Corps. Dented water-bottles were used for issuing lubricating oil for motor transport.

Horse shoes were a considerable item of salvage and the broken halves of two shoes were welded together and made as good as a new shoe: old and rusted horse-shoe nails were put into a rumbler—a barrel into which bits of leather had been placed—and kept continually turning by machinery. An hour or so of this treatment produced nails as bright as silver and as good as new. The Calais Salvage Dépôt dealt with an average of 1,000 rifles daily of which half were repaired daily for re-issue.

Out of an average of 400 seemingly hopelessly broken bicycles received weekly, about 150 new bicycles were manufactured—the nut of one, the spokes of another and the handle bar of a third, replacing those items which were missing in a fourth. Steel helmets bent and distorted to all shapes and sizes were pressed into shape by hand, relined, provided with new chin-straps, painted, camouflaged, and sanded—and this all by French girls who were paid one penny for 3 helmets and turned out an average of 20,000 new helmets a week.

From bits of unserviceable tentage, waterproof covers, canvas stretchers and ground sheets, such articles as nose-bags, horse-shoe valises, waterproof ration bags and other similar

articles were made. A complete account of the work of retrieval at Calais would fill a two volumued book, so I will finish with Ordnance salvage with one more item only—and that perhaps the most interesting and spectacular of all—boots. I would ask you to imagine the most disreputable, worn out, and decrepit pair of boots that you have ever seen protecting the feet of some poor wretch in the streets of London—a pair that would make a scarecrow blush for shame in his field of turnips. Had you handed over those boots to the Calais Salvage Boot-shops you would have received them back in a few hours fit for a King's Birthday parade.

An average of 80 to 100,000 boots were received at Calais weekly and it is remarkable to note that by far the greater number were 'left' boots. On entering the workshop they were first washed—and they badly wanted it—many were the boots of dead or wounded men; the worn leather of the sole and heel was stripped off and each pair parcelled up with the requisite materials for its repair and passed over to a gang of cobblers who rapidly tacked on the sole piece, a new heel and heel tip; the boot was then placed in an extraordinary machine which hammered nails into it, taking under 30 seconds to complete the nailing of one boot; a certain amount of levelling and trimming of the edges by another machine, and the fitting of eyelet holes when required, and the thing was done. There yet remained to make the leather soft and pliable as new, and this was achieved in a bath of mixed cod and whale oil.

In this manner between 4 and 5,000 pairs of boots were rendered fit for issue daily and classified into

- (a) Fit for troops in the Line;
- (b) For issue on the Lines of Communication and Bases;
- (c) For Chinese Labour and Prisoners of War.

On an average about 30,000 good 'odd' boots were received weekly; yet, even out of these, 8,000 good pairs were

made up. There still remained a Class 'D' boot that the ingenuity of even the Calais experts could not deal with in France; these were shipped to England to the extent of about 350,000 a month where they were converted into clogs for sale to civilians. The upper portions of field-boots which were beyond repair were cut up into laces by an ingenious contrivance, the invention of one of the two officers in charge of the Boot-shop—who, by the way, in civilian life were flourishing boot manufacturers in Northampton.

The estimated cost of bringing a salved pair of boots to stock as fit for issue was 5s. per pair including the cost of labour. At the time of which I am speaking new Army boots cost 22s. per pair and a salved pair were valued at Calais at 12s. 6d., a saving to the State of 9s. 6d.

One small item of salvage enterprise at Calais must be recorded; the officer in charge of the Ordnance work-shops finding that stocks of oil for paint-work were becoming increasingly difficult to obtain, hit upon the idea of using blood from the Calais abattoirs as a substitute. There are few officers who served in France towards the end of the war, who know that many a limber and G. S. wagon issued to them were painted in this manner.

Salvage returning to England was conveyed by the Train Ferry, a "flat-bottomed floating quay" with an immense well deck extending practically the entire length of the vessel. The deck was provided with four lines of rail capable of taking 54 railway trucks. By this means truck-loads of salvage loaded in France were conveyed straight to the Munition Factories all over England—an example of economy in time and labour.

The bulk of Royal Engineer material which was salved was capable of immediate re-use in the forward areas, and it

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was not, therefore sent to the Bases. Beyond a certain amount of repair work and the utilization of all scrap metal, from a salvage point of view there was nothing much of interest in this Department at Base Depôts.

The Tank Corps possessed a special organization for salvage work in the field, and where a tank could not be salvaged as a complete unit, it was dismantled in the field and the parts salvaged. All unserviceable or obsolete parts were set aside as scrap metal and shipped to the foundries in England. Aeroplane salvage material was dealt with by Aeroplane Supply Depôts, and Royal Air Force Medical Transport salvage by Aircraft Depôts. A large amount of material was made serviceable again in the Royal Air Force repair shops, and the scrap collected for shipment included metals of various kinds, wood, rubber, canvas and fabric. Petrol salvaged from crashed aeroplanes was used again for motor transport purposes.

In the Balloon Repair section a great economy was effected in regard to fabric; and it was largely used for the manufacture of small "Nurse balloons" for storing hydrogen in the field. Two and a half nurse balloons could be made from the fabric of one large balloon and represented a saving of £670 as compared with the cost of a new balloon.

Smaller pieces of fabric were used for making parachutes, and other articles, as well as for patches for motor-tyres.

One would not imagine that the Royal Army Medical Corps could have had any salvage, but such was not the case; it consisted of unserviceable panniers, repairable and unserviceable splints and instruments and wooden packing cases, bottles, jars, safety pin boxes and thermometer cases, etc. Any article which was found serviceable was used forthwith to equip the new panniers, which meanwhile were being created out of the broken ones received; those articles which required repair were dealt with by skilled workmen and made ready for re-issue,

while any beyond repair in France were shipped to England. Surgical instruments were cleaned, repaired, sharpened and re-plated and turned out as new to the extent of 500 a month at one Dépôt alone, and there were 5 of them in France. Wood or iron splints were repaired by carpenters, blacksmiths and leather workers.

All the empty bottles, jars, wrappers, cases and boxes were shipped to England to be re-packed with medical stores for the Front.

Finally, slightly soiled surgical dressings were washed and sterilized and re-issued. Dressings which had been used for infectious cases were of necessity destroyed, but the bulk of the used surgical dressings constituted an intermediate class which, after treatment, was dealt with as cotton waste.

The greatest contribution of the Royal Army Veterinary Corps to salvage was in the recovery of bye-products from dead animals and in the sale of animals no longer fit for military work. The material recovered included hides, hair, hooves, fat, bones, dessicated meat and manure.

A short description of the "Economiser Plants" which were set up at 7 different places is of interest. The one now described was at Neuf-Chatel, half way between Boulogne and Calais. About 30 horses were dealt with here daily; after the skin had been removed, it was cleansed with water and thoroughly salted; in this state bundles of hides were shipped to England where they fetched an average of £1 apiece.

After the removal of the bones the meat was roughly cut up into pieces of 3 or 4 lbs. weight and shovelled into a mincing machine, which again cut it up into pieces of the size of an orange. It was then dealt with by what was termed a 'melter'. This consisted of a large metal cylinder fitted inside with wooden paddle-wheels, the whole being encased in a steam-tight compartment. The inner cylinder was filled from a hopper into which the pieces of meat were passed. When

sufficiently charged, super-heated steam was introduced into the outer casing and the meat kept revolving in the inner cylinder by means of the paddle-wheels. The process lasted about 3 hours, at the end of which the meat had been turned into a dry spongy sort of snuff-coloured powder, which fetched a high price in England as chicken food.

Meanwhile the bones had been placed in a specially constructed boiler which allowed all the fat to be separated, and this also went to England to the Munition factories to be turned into glycerine. Certain of the larger bones were disposed of in Paris to the manufacturers of bone-handled knives, buttons, and similar articles, while the smaller bones were crushed into bone meal for chicken food or bone-manure for the agriculturist, the local cultivator also securing the blood from the killing sheds for his fields. Horses which, while unfit for work, were otherwise healthy were sold in Paris and elsewhere for food. During the month of August 1918 the total value from these bye-products, including the sale of cast-animals, was £ 31,000.

Salvage in the Royal Army Service Corps fell naturally under the two main heads of Supply and Transport. Under the head of Supply the general name of "Containers" included the various crates, barrels, cases, sacks, jars, tins, drums, bottles and casks which in the early days of the war were often discarded or used as fuel. Serviceable containers, after such cleaning and repair as were found necessary, were used again for refilling either in the United Kingdom or France. To secure economy in shipping, certain classes of cases were 'broken down' into their component parts and shipped Home in the form of a flat bundle termed "shooks".

Petrol and oil empties formed an important category by themselves. At the Petrol Depôts at Calais and Rouen arrangements existed for the cleaning and repair of these, the oil and petrol collected during the process being recovered and

cleansed in filters and re-issued as a general service oil to the Motor Transport.

The containers were placed over an apparatus fitted with 50 steam jets, which, by forcing steam into the interior, cleansed out all oil; this fell into a conveniently placed sump and from there passed to the filter; in this manner an average of 250 gallons of waste oil was collected daily. The salvage of supplies was not however confined to the preservation and re-use of containers. Many by-products were realized from damaged supplies and from the inevitable spillings and wastage in handling large quantities of stores.

At the large bakeries at the bases the dough scrapings left after the bread had been kneaded, added to flour sweepings and the crumbs from the bread stores, were sold for poultry and cattle food, or for paste in the doll making trade, as well as for the manufacture of "Stick-phast" and dog-biscuits. Even the wood ashes from the furnaces found a market and realized as much as 30 s. a ton. The flour sacks themselves were treated in a sack-beating machine; the average amount of flour used daily at the Calais bakeries was 120 tons and the yield from the beating of the sacks was sometimes as high as 500 lbs.

Tea sweepings were collected, and, if fit for the purpose, were sold for human consumption. If they were wet or burned a market could be found for them for extracting theo-bromine, a product of the pharmaceutical trade. The damaged sugar from iron-rations went to make syrups or to manufacture alcohols; damaged dried fruits being similarly used. Hay, oat, linseed, bran, and rice sweepings, or any damaged stocks of these supplies, were put to some useful purpose or sold to an advantage to the State. Rice-sweepings serve as an illustration; the outer husk of the better qualities was removed and the rice sold for human consumption, those of an inferior

quality being disposed of for the manufacture of forage substitutes. Live sheep and goats for the Indian troops were shorn of their fleeces before being despatched to the slaughter-house, the wool and the skins subsequently obtained from the dead animals realizing a considerable sum of money. Rabbit-skins were not overlooked and during 1917 one dépôt alone sold 129,000 at the rate of 16 francs per 100 a price which rose later to 26½ francs per 100.

Royal Army Service Corps Transport comprised both horse-drawn and mechanically driven road-vehicles, but as the horses, vehicles, equipment and harness of horse-drawn transport were supplied by the Remount Department and the Royal Army Ordnance Corps, the salvage derived therefrom was not claimed by the Royal Army Service Corps.

Towards the end of the war there were close on 50,000 lorries and motor-cars in use in France, and the number of motor cycles was legion. The department did not recognize "Salvage" except in cases where vehicles were rendered completely unserviceable by enemy or other action. Repairs were done in the field, but when the mobile repair units, which might be termed the family doctors, and the Heavy Repair Shops at the bases, the Harley Street specialists, failed, the salvage organization stepped in and over a welter of damaged materials passed a magic wand, the result of which, if equalled, was never surpassed by any other Department of the Army in France. The work on the Southern Lines of Communication was entrusted almost entirely to two units, No. 1 Base Mechanical Transport Depot and No. 4 Heavy Repair Workshop, both at Rouen, the former acting as a receiving depot for the 7 truck loads of salvage which arrived daily. About 50 % of this material was eventually turned into scrap, but, owing to the valuable nature of the consignments, the work of sorting had to be very carefully carried out. For instance, if



the identity of a bronze gear wheel was established it was probably worth between £7 to £10, otherwise it only became scrap at 3s. 6d. a lb.

Space precludes me from giving you anything but the briefest sketch of the Salvage work at No. 4 M. T. Heavy Repair shops. It covered acres of ground and employed 2,500 German prisoners and some hundreds of British supervisors.

To take typical examples of the work, cylinders which were worn out were bored out to a pre-determined or non-standard size and oversized pistons built for them from scrap metal; tools such as spanners and wrenches, the jaws of which had become widened, were welded up with scrap metal and then ground down to the correct sizes; in this way complete new sets of tools were ready for re-issue with lorries and cars when the latter were sent out repaired and ready for the road. Valves, which were burnt on the seats and bent at the stems, were reground and straightened, thereby giving them another spell of 1000 to 2000 miles in the parent vehicle. When they were found too small by wear for their original engine they were forged to different shape of head, the stems drawn out longer or cut off shorter, and the valve machined up to dimensions to suit a different type of vehicle.

Ford transmission shafts, which were worn out, were cut into halves and made into two Ford road-wheel shafts. Damaged or worn locomobile or other shafts of large enough diameter were converted to light car shafts such as Daimler, Sunbeam, etc., and when no longer serviceable as such, were converted again to Ford, Singer, or other small steel parts.

The electrical section retrieved an average of 5000 sparking plugs a month, while the intricate machinery installed in this particular shop for the testing of magnetos was made from the salvaged parts of Ford cars by an officer who, before the war, was in the employment of the Bombay Tramway

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Company. Inner tubes no longer capable of repair were cut up and treated with para sheet, a composition of almost pure rubber, and stamped out into patch-quicks for issue to cars and lorries on the road.

A typical example of salvage was the repair of damaged radiators, and by the simple process of extracting serviceable pieces from two or three partially damaged radiators of the same pattern, a perfectly new radiator, undistinguishable from a brand new one, was produced. Radiators which were so battered as to be passed retrieval as radiators were put bodily into a coke-heated oven and reduced to a condition in which the brass or copper components could be separated one from the other.

The scrap yard supplied the entire wants of the shops with the exception of about 30 per cent of pig-iron.

Nothing was wasted and all the metal filings and chip-pings from underneath lathes and benches were collected. The technical name for this material is 'swarf.' To deal with it a special machine was contrived. It consisted of a revolving drum fitted with electro-magnets. A stream of swarf, fed from above, flowed over the revolving drum, the magnets attracted the iron filings, allowing the brass to escape into a shoot; once passed the shoot the machine became demagnetized, the iron automatically dropping into a convenient bin.

The gas used throughout the shops was made from oil and grease salvaged from lorry engines, gear boxes, etc.

Calculated at pre-war prices this particular salvage installation brought back into use from seemingly useless debris articles of the average value of £ 700,000 per year, a very large portion of which, but for its inception, would have been lost to the State.

It was not however solely at the Base Depots and Ports that the story of the "Romance of Waste", as it has been aptly called, was written: there were many sources of economy which would have remained undiscovered and unexploited but for the creation of the Department of the Controller of Salvage.

Shortly after the Department came into being the Senior Chemist happened to notice near Arques a large pond of whitish looking sludge. It was the waste from the gas plant set up by the Royal Air Force for making hydrogen for balloons and had been slowly accumulating for months. It was found to consist of sodium silicate, better known by the name of water-glass, with a top stratum of vaseline grease. Arrangements were immediately made by the salvage personnel of the 2nd Army to skim off the grease, which was then purified and reissued as a lubricant, while the water-glass underneath was pumped into drums and issued to the Royal Engineer Services as a fire-proofing agent. These bye-products were valued at £ 550 during the first month of their recovery. Perhaps the most wide-spread bye-product was the recovery of solder from empty tins, the material for which was naturally lying everywhere in the tins of bully-beef and other rations issued to the Army. When it is remembered that the market price of solder was at that time £ 357 per ton a saving in this direction was well worthy of some attention. Kilns were therefore erected all over the Lines of Communication and Bases, and as they were of the simplest construction the materials for which were lying about in all directions, the cost of production was negligible. The yield from these kilns ranged from 1 to  $2\frac{1}{2}$  lbs per 100 tins, and in this fashion solder to the value of between £ 6 and 7,000 per month was recovered.

An immense source of potential salvage lay in the actual tins themselves, but detinning is a process that requires elaborate machinery, and even the price of tin, £ 380 per ton,

did not warrant the cost in labour and transport required for their conveyance to England. Simple and easily constructed devices were however set up for cutting them up and packing them in flat bundles, when they were eagerly brought up by merchants in France and England as tin plate. Up to the summer of 1918 it had not occurred to anyone that effective or obsolete ammunition was anything but a dangerous nuisance. In fact ammunition officers had in some cases been instructed to bury some of the surplus stocks—while at Boulogne a quantity had been taken out to sea and dumped. Unserviceable Mills-grenades were made however to realize large quantities of aluminium, brass, cast-iron and ammonium nitrate. The machinery for securing these bye-products consisted of a wheel, a trip-hammer and four smiling Chinamen, who turned the wheel and fed the hammer and easily kept pace with as many defective grenades as the British Army cared to produce.

Smoke cases which were no longer required yielded pitch, nitrate, and brass, the pitch when mixed with sand being converted into tiles for flooring huts in the camps at Boulogne. Space will not permit me to describe in further detail the utilization of all the various bye-products and materials which were attempted in France; among some may be mentioned the recovery of lead from tea-chests, the manufacture of curry-combs from the metal covers of soda water bottles, the recovery of fatty substances from the waste water of laundries, the manufacture of glue from horses' blood, whitewash from used calcium carbide, "Tommys cookers" from biscuit-tins and the manufacture of briquettes from coal and sawdust to augment the winter fuel supply. Everything seemed to have a value, even broken glass fetching as much as £20 a ton.

There was however one source of bye-product which is well worthy of your attention in as much as it was exploited as much for the benefit of the soldier as for the value of the material. This was the bye-product of the meat rations issued

to the Armies. These consisted of 1st and 2nd class dripping, bones, scrap or rough fats, and swill. Every unit was made to keep at its cook-houses separate receptacles for all these, and as they accumulated they were despatched to the Fat-Extracting Depots of which there were 6 on the Lines of Communication. Accounts were kept and units were paid for what they had collected.

First class dripping was produced principally from suet, surplus fat from the carcasses, and fat removed prior to cooking; these were rendered down and clarified by the Corps themselves, who kept what they required, sending in the balance. Second class dripping consisted chiefly of bacon fat which was left in the pans after frying, also from cracklings which are the fibrous residue left after rendering down raw fat and skimmings from stock-pots.

Bones described as 'Green' or 'Dried' according to whether they had been used for soup, etc., were sorted at the Fat Extracting Depots. The green were put into Field Fat Extracting Plants, the invention of the principal Chemist at Salvage Control Headquarters. This was a tank into which superheated steam could be introduced; the bones were boiled in this for 8 hours by which time all the fat had been drawn out of them; this was placed in barrels, and the bones emptied out and dried. From one installation during a period of 6 months 4,796 tons of dripping and bones were sent to England; these consignments yielded approximately 412 tons of glycerine.

During the month of August 1918 the total value of these particular bye-products from all sources was as much as £264,000, and all this money went into the pockets of the men.

Waste paper was another bye-product and large quantities were collected; hand baling presses were installed even in the zone of operations and steam presses at some of the bases.

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The price of waste paper varied between £ 5 and £ 30 a ton according to its nature. Surely in India, this land of babus and monthly returns, a huge field for economy by the collection of waste-paper waits the enterprise of some officer with a bent for salvage.

The immense effort that was being made in every direction was, like everything else, stimulated by carefully prepared propaganda. These included the issue of a limited number of coloured posters. Two different types were circulated, one for exteriors—prominent points where they could be seen by large numbers of troops—and one for interiors, such as Canteens. Designs for posters were invited from the troops and some excellent ones were sent in.

Finally let me give you some figures to show the really stupendous work that was done. They are taken from a report by the Controller of Salvage and show that for the 5 weeks ending 31st August 1918, salvage to the value of £ 16,968,000, was collected and disposed of in France.

I will conclude with the principles of Economy as set out in a pamphlet issued by the Commander-in-Chief in France.

“The first economy is to refrain from demanding material not absolutely required. The second economy is to treat all material used with the greatest care. The third economy is to return all unwanted material, all material requiring repair, all unserviceable material and all ‘empties’. The fourth economy is to save all material that has become derelict.

To observe these principles is an obligation which rests on every officer, N. C. O. and man in the Army”.

## INFANTRY IN THE ATTACK.

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*A lecture delivered at Loralai on the 23rd February 1921*

*By Lieut-Col. F. S. Keen, D. S. O., 2-15th Sikhs.*

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1. I am going to attempt to trace the evolution of infantry tactics in the attack during the great war, with special reference to fire and movement. In so doing I hope to bring out the fact that there are certain basic principles, which were clearly set forth in our pre-war training manuals, and which have not varied in the least, in fact the great war has emphasised the truth of those principles more than any other war in history. What does vary is the method in which those principles are applied in practice by commanders and troops to the conditions with which they are confronted in any particular campaign. The development of weapons, the nature of the country, the armament of the enemy, are all causes which force us to vary our methods. There is a tendency among our officers to look for a formula for each of the various forms of warfare; one for trench warfare, another for frontier warfare, another for bush warfare etc. In my view the essential thing is first to get hold of the root principles and then to study and practise the methods of applying them in varying circumstances. By this means we train ourselves instinctively to do the right thing under any conditions with which we may be faced.

2. The principles which I wish to emphasise to-day are as follows:—

(A) *The climax of every attack is the infantry assault.*—Therefore “the object of infantry in the attack is to get to close quarters as quickly as possible.” [I. T., 1914—121. (5)]

(B) *Movement must be covered by fire.*—In face of strenuous opposition the infantry cannot advance to the assault unless the enemy's fire is subdued by our own. Therefore “the object of fire in the attack, whether of artillery, machine guns or infantry, is to

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bring such a superiority of fire to bear on the enemy as to make the advance to close quarters possible." [I. T. 1914. 121 (6)].

(C) *Infantry must deploy in depth.*—For a successful assault two things are required, weight, and power to resist a counter-attack. Therefore "the company in the firing line should be divided into firing line and supports". [I. T. 1914. 121: (6)].

3. I do not suppose that any one will be found to challenge the truth of these principles. In the defence, success may be achieved by fire alone, but in the attack this is not so. Given sufficient weight of artillery, the enemy's position may be rendered temporarily untenable, but a hurricane bombardment cannot be kept up indefinitely, and unless the infantry advance and occupy the position the enemy will re-appear as soon as it dies down. The enemy of course may not wait for the cold steel, in which case the mere threat of assault has achieved the object in view. A determined enemy will await the charge, and will meet it with a counter-attack. A single line has neither driving power to carry it home, nor resisting power to maintain itself in the position.

4. I propose now to consider how we were taught to apply each of these principles in 1914, what modifications of method took place during the war, and finally how we can best train our troops in the methods which have been evolved as a result of the experience of the war. I will begin with the provision of the necessary fire to enable the infantry to advance. In 1914 each division had its artillery, some 70 field guns and howitzers, each battalion its section of 2 machine guns and each man his rifle. Provision was made in our text books for support of the infantry by artillery, but great stress was also laid on the "infantry fire fight", portions of the firing line advancing covered by the rifle fire of other portions. In the first few months of the war we found that our artillery



and machine guns were inadequate to the task of supporting the infantry. The latter were too often unable to gain their objectives or to hold them when gained. The first step we took was to increase the number of guns and machine guns and the supply of ammunition. We also learnt from the French the art of developing the artillery and machine gun "barrage", and we taught our infantry to advance to the assault under this barrage, and to trust practically entirely to it to carry them into their objectives, their own fire power being reserved for repelling any counter-attack after the objective was won. Heavy machine guns ceased to be an infantry weapon, and in the attack were used exclusively for "barrage" work. The long drawn out period of trench warfare and the evolution of the trench mortar, the rifle grenade and the bomb resulted in the infantry in the attack trusting less and less to their own fire power, although this had been vastly increased by the introduction of the Lewis gun as a platoon weapon.

5. Early in 1918 both sides realised that the pendulum had swung too far. The infantry had been taught to rely too exclusively on the support of a pre-arranged fire programme. The unexpected was bound to happen sooner or later. Either the infantry were unable to keep pace with the barrage or the latter for some reason failed. In either case the infantry found themselves deprived of the fire support which was essential to enable them to carry out the advance to their objectives. They had not been trained to provide the necessary fire for themselves, and the result was failure. In the training notes and battle instructions sent out by Ludendorff for the German offensive of 1918, and also in those issued by our own G.H.Q. in France as a result of the lessons of that offensive we find almost the same words. The attack under a barrage was too rigid, too inelastic, and we must revert to the infantry fire fight. I quote from memory: "Infantry in the attack must trust *mainly* to their own fire power to carry them forward to the assault."

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6. If this was true in France in 1918, where guns were numerous and the supply of ammunition almost inexhaustible, when the enemy positions were well defined and the distances over which the infantry advance had to be carried out were relatively short even in the final advance, how much more must it be true in India, and especially on the North West Frontier where topographical and transport difficulties make it impossible to bring up either the guns or the ammunition for adequate artillery support, where attacks have often to be carried out over considerable distances, and the enemy's position is so indefinite as to make it often impossible to locate till the infantry are close up to it. There is no shadow of doubt that our infantry will have to trust in battle to their own fire power, and therefore we must train them to use that power to the best effect.

7. This decision was not accepted without discussion and controversy. I remember in Mesopotamia in 1918 several senior officers with considerable war experience who refused to allow their infantry to be trained to the fire fight. They argued that "once the infantry halt to fire the attack has failed." This was one of the false lessons of trench warfare, and a very short experience of more open fighting was sufficient to convince any reasonable man of its fallacy. The attack for which the so called "walking attack" under barrage fire had been devised was in reality the short trench to trench assault over a distance of from 50 yards to 200 yards. Where attacks had to be made over greater distances than this this method was bound to fail. At the same time the argument contained a germ of truth, for we must not teach our infantry to halt in order to fire. What we must teach them is what to do when enemy action or force of circumstances compels them to halt. In order to resume the advance covering fire must be provided. The one form of covering fire which infantry can never lack is their own, therefore we must teach them to develop their own fire. We must still cultivate artillery support of infantry, but we cannot trust to it alone.

8. In training infantry for the fire fight we are faced with an initial difficulty. Infantry advancing steadily suffer less than if they halt. Therefore for every reason the first thing we must impress on them is that it is their bounden duty to advance steadily to the assault, and not to halt to fire or for any other reason unless compelled to do so. But if we train them only to the "walking attack" we shall find, as was found in the war, that when one portion of the line is forced to halt, the tendency will be for other portions to conform. This is exactly that we wish to avoid. In training we must devise some means, umpires are probably the best, of forcing certain platoons or companies to halt as the result of heavy casualties, and we must instill into the minds of all that it is duty of neighbouring platoons and companies to press forward and of those which are forced to halt to bring fire to bear in such a direction as to help their neighbours forward. This is the essence of "soft spot tactics". Press on where progress is possible, don't ram your head or your reserves into a stone wall. The principle is not new, but we lost sight of it for a time in the war.

9. Before turning to a consideration of the methods of conducting the infantry fire fight evolved as a result of the experience of the war, I will first say a word about artillery support. To be really effective this is very largely dependent on information regarding the progress of the infantry and the nature and location of the opposition. To gain this information the artillery send up Forward Observing Officers, but these cannot be everywhere. One per battalion in the firing line is the most that we can expect, and therefore it is highly important that all infantry officers should be trained to supply the required information in a manner intelligible to the artillery. Once they realize that this is not for the benefit of the artillery but for their own, they will see the necessity for it. Practice is the only way to acquire the art, and infantry officers should take every opportunity of attending artillery practice camps,

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and combined field firing should, whenever possible, form part of the annual training of every battalion.

10. The infantry weapons proper are, (1) a section of Vickers guns with Battalion Headquarters. (2) In India one, (at home two), Lewis guns with each platoon. (3) The men's rifles. I do not intend to deal with Stokes mortars, rifle grenades and bombs. Occasions for their effective use will undoubtedly often occur and they will probably form part of the armament of the infantry of the future. Machine guns, rifles and bayonets will always be used and it seems to me that we must train to higher pitch than at present with these before devoting much time to the others. If a battalion is trained to use its various weapons to the best advantage, its fire power is quite double that of a pre-war brigade. It is therefore well worth our while to consider how we can get the most effective use out of each of the various weapons. First the section of Vickers guns. These have a longer range and more stable platform than the Lewis gun, and are therefore more suitable for comparatively long range covering fire. Two things should be borne in mind in deciding on their position. (a) Oblique fire is infinitely more effective than frontal. (b) Every change of position means loss of fire power, therefore do not in the attack bring the guns into action at their extreme range.

11. In the fire fight the weapon from which infantry derive most advantage is undoubtedly the Lewis gun. Rifle fire will be used, but the experience of the war shows beyond question that it is automatic fire that really counts; it is this that the infantry soldier dreads and therefore it is this that he must develop. The Lewis gun is comparatively mobile, and its effective range is comparatively short, not much over 700 yards.

Therefore it is essentially a weapon to use as far forward as possible. It should be an axiom that every platoon advancing to the attack should have its Lewis gun with it. A C. O.

may find opportunity for using the Lewis guns of reserve companies for covering fire, but the Vickers guns are in every way more suitable for the purpose. In the fire fight the nature of the fire of the Lewis gun with its narrow cone, so much more effective against an oblique target, makes it the ideal weapon for mutual support between different portions of the firing line. Lewis guns on the outer flanks of the following lines of their own platoons are invaluable for bringing fire to bear against an obstacle that is holding up other platoons or companies. The nature of the country on this frontier gives ideal opportunities for this mutual support. A company in the attack is usually allotted one or more spurs as its frontage while other companies advance up parallel or converging spurs on its flank. Every company can have two Lewis guns on each flank and these are ideally placed for helping neighbouring companies forward. Rifle fire should be similarly employed, but for this a high pitch of training in fire control and fire discipline is essential.

12. Now let us consider what our teaching was in 1914 on the subject of infantry formations in the attack. Stereotyped methods were forbidden (I. T. 114. 1.) and only broad rules and general principles were outlined in our text books. Small columns were advocated as a suitable formation for advancing under artillery and long range infantry fire, extended line for the fire fight. As already stated, the principle of deployment in depth was applied to the company. This principle was comparatively new in our army, although the Germans had employed it in the campaigns of 1866 and 1870, and I do not think it was universally understood. The tendency was for the supports to merge into the firing line at a very early stage and the leading companies almost invariably assaulted in line, followed by other company lines at a distance of something like 300 yards. Very early in the war we found that this distance was too great, as the leading lines were counter-attacked and driven out of the objective before the supporting lines could reach them. Also the platoon came

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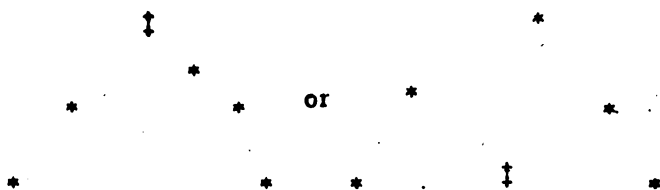
to be universally recognised as the fighting unit in place of the company, and as a natural corollary the principle of deployment in depth was adopted in the platoon.

13. In 1917 G. H. Q. in France made an attempt to standardise infantry formations and issued a pamphlet entitled "The normal formation in the attack," which definitely cancelled I. T. 114. In this pamphlet various alternative formations of companies in the battalion and platoons in the company were given, but the platoon was always in two lines with the Lewis gun section on the outer flank of the 2nd line. Here again, as in the case of the walking attack under barrage fire, it was soon found that the pendulum had overswung itself, our methods had become too rigid, and the "normal formation" only survived a month or two of practical experience. It too had been devised for the short assault from trench to trench. As soon as attacks began to be carried out over larger distances it was bound to fail. So we reverted to broad rules and general principles, small columns under long range fire deploying into lines for the assault or the fire fight. But the "normal formation" was not altogether wasted. Bearing in mind that the climax of every infantry attack is the assault, it was recognised that all preliminary formations must be such as to lead up to a suitable assault formation, and for the assault something of the nature of the "normal formation" has been proved in every theatre of war to be best, *i. e.* platoons in two lines followed at short distances, 25 yards to 50 yards, by other platoons of the same company and by other companies, all in more or less the same formation.

14. And that is where we are to-day. For the assault the platoon must be in depth, so as to give it weight and resisting power within itself. This must be borne in mind throughout the various stages of the attack. As a company passes through the various zones of fire it may have to break up into platoon columns, and then section columns, in diamonds or squares,

before deploying into line. All the time the company commander must look ahead to the formation which he means to adopt for the assault, and he must so dispose his platoons, and the platoon commanders their sections, that they will drop into the assault formation without complicated manœuvring.

15. There is one modification of the small-column which is particularly applicable to frontier warfare, the "arrow head".



*i. e.* the section with men in single file echeloned back from the centre. The section is well in hand, and fire can be rapidly opened to front or flank. It is suitable for a section exploring, *e. g.* the point of an advanced or flank guard, or advancing alone to occupy a picquet position. In the latter case the section has a little depth within itself. The section commander should drop back and control the rear files as a small support.

16. A word now on the subject of frontages. Before the war we were taught that a battalion in the assault should be on a front of not more than one yard per man. During the war, owing to the highly organised defences in France, the frontage was decreased and the 1917 pamphlet gave 200 yards as a suitable frontage for a battalion in attacking a strongly held trench system, and 600 yards for less highly organised defences. "Platoon training" 1919 gives the front of a battalion in the attack at 800 to 1500 yards, and the increase is undoubtedly due to the increased fire power. Before the war one was taught to avoid gaps in the attacking infantry, but a

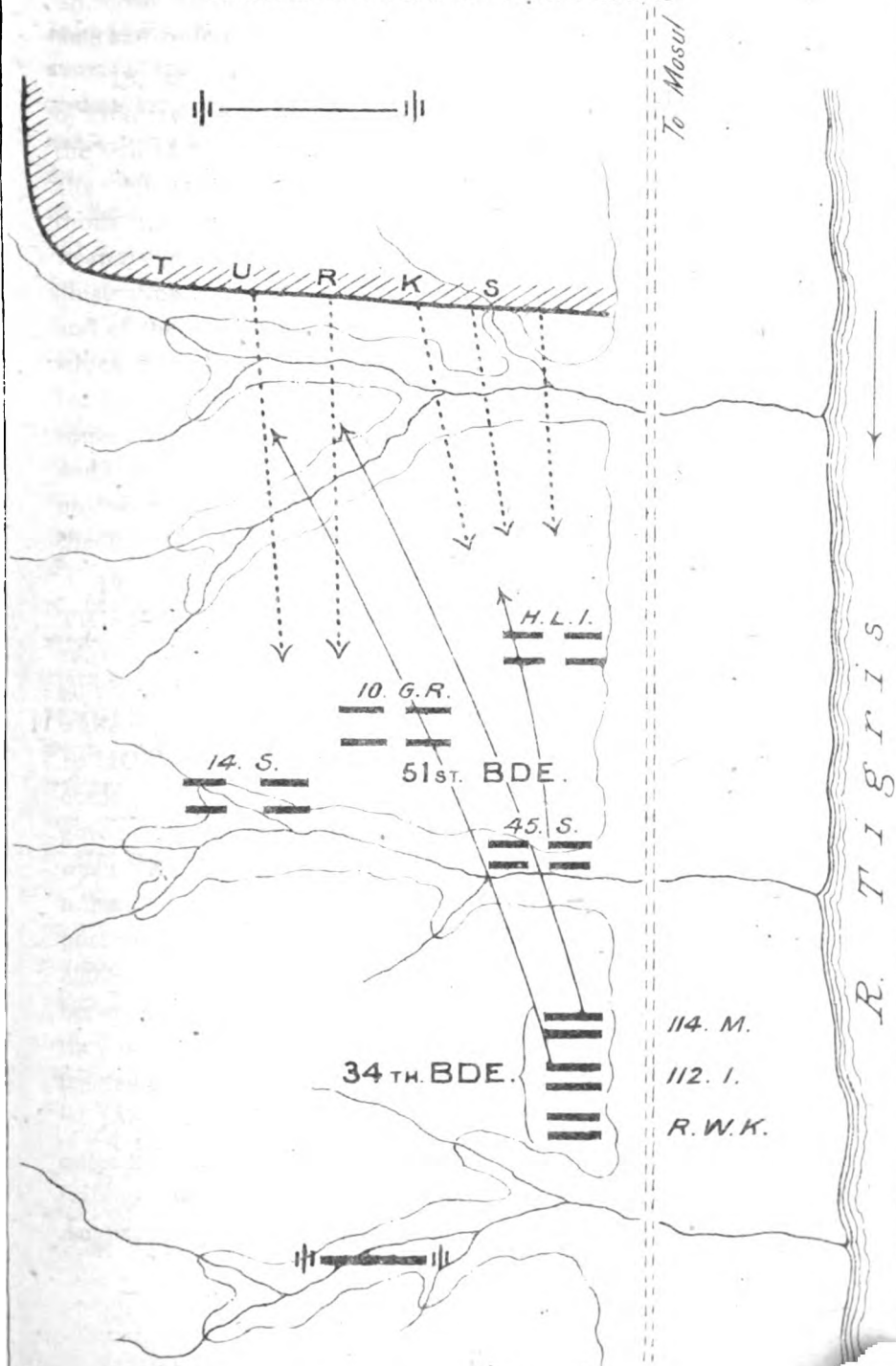
***Infantry in the Attack.***

gap that can be covered by effective cross fire of Lewis guns ceases to be dangerous. A battalion on an 800 yards front with 2 Companies up will only have 8 rifle sections in its leading line, *i. e.* one section per hundred yards. This does not mean that the men of the section will be extended over that 100 yards. On the contrary they will not cover more than 20 yards, but the gaps will all be covered by Lewis guns in the succeeding lines. In open country gaps facilitate mutual support by Lewis gun fire, but they are still to be avoided in close country, or in any circumstances where they cannot be covered by effective fire.

17. Another fallacious idea conveyed to some by trench warfare to which I wish to refer is that certain portions of the infantry are told off for the decisive attack and others for "holding" attacks. This fallacy is apt to prove rather dangerous if it results in parts of the line not pushing their attack home to the assault. In France during the period of trench warfare it was possible to determine in advance where the decisive attack was to be made. We had such accurate maps of the enemy's trenches that it was possible to reproduce them on full scale behind the lines and to carry out a dress rehearsal. In warfare of movement such accurate information will never be obtainable in advance. Every commander has to fight for his information as to the strong and weak points of the enemy's position. Cavalry and aircraft cannot find out all that is required, the infantry too must bear a hand. Therefore every body of infantry told off for the attack must realize that its task is to press forward and do all in its power to close with the enemy. It often happens in battle that the unexpected progress of a part of the line where decisive success was not originally expected has given the commander the clue to the weak spot in the defences, and by driving home his reserves at that point he has gained decisive success. For the principle on which to use reserves in battle is not to cram them in where the resistance is most stubborn, but to follow



# DIAGRAM OF SITUATION MIDDAY 29-10-18





up those portions of the line which are making progress; to find and follow the line of least resistance.

18. My endeavour has been to show that both in the case of infantry fire tactics and of formations we have returned in the end to the principles enunciated in our pre-war text books after departing from them for a while. In both cases our methods have been modified as a result of the improvement in our weapons, notably by the introduction of the Lewis gun. In illustration of the vital importance of the principles advocated and of their application I will quote the first and last battles in which I took part in the war. The first was TANGA in November 1914. Here artillery support was practically non-existent, some of the troops were not properly trained in the fire fight, and they were deployed on a very extended front with little or no depth. The result was disastrous failure. The last was on the TIGRIS in October 1918 and merits a fuller description.

19. The 17th Division operating on the right bank of the TIGRIS was opposed by a Turkish force under Ismail Haqui consisting of the remnants of 3 divisions. The 18th Division on the left bank was in a position to assist us by artillery fire, while a Cavalry Brigade under General Cassels barred the road to MOSUL. By the 29th October the 17th Division had succeeded in driving the Turkish army through the FATAH gorge, which is not dissimilar in character to the ZHOB between BRUNJ and MIR ALI KHEL, and had advanced some 45 miles during a week's hard fighting. Owing to casualties and transport difficulties we had actually available on the 29th only 3000 infantry and 18 field guns and howitzers. The Turks had between 7000 and 8000 men and 50 guns. All that morning they opposed our advance with a rear guard while they constructed an entrenched position a few miles north of SHARGAT.

20. General Leslie's intention was to turn the right or outer flank of the Turks, and with this idea the 51st Brigade leading the division kept on extending its left. About 11th August we got a message from a plane defining the Turkish

main position and showing that the right flank was sharply refused. The dispositions of the division at that time were as shown on the sketch. The Highland Light Infantry led the 51st Brigade with the 10th Gurkhas and 14th Sikhs echeloned to the left as a result of the extension of that flank already referred to. The 45th Sikhs were in Brigade reserve. The 34th Brigade, consisting of the Royal West Kents, the 112th Infantry and the 114th Mahrattas, followed the 51st.

21. On receipt of this information General Leslie made up his mind to assault the Turkish left, as an attack on the right would involve undesirable delay. This illustrates the point that in open warfare a general will more often than not have to change his mind as the fight progresses. The front of assault was 800 yards facing the H. L. I. The 45th were to advance to the assault carrying the H. L. I. with them. The 114th Mahrattas and 112th Infantry of the 34th Brigade were to follow in succession. The Royal West Kents were held in Divisional reserve. To give time for registration and reconnaissance 4 P.M. was named as the hour of assault. The guns were to cover the infantry advance, and to lift when they were 100 yards short of the Turkish trenches, the time to lift being indicated by F. O. O.'s. As an additional precaution, in case the F. O. O.'s wires were cut, the infantry were to send up white Verey lights as a signal for the bombardment to lift. The Turkish position was on high ground with its left on a bluff commanding the MOSUL road and the flat cultivated ground thence to the TIGRIS. The advance crossed a succession of deep nullahs running from left to right.

22. During the advance several interesting things happened. In the first place the Turks had organised a powerful counter-attack for 4 P.M. and the signal for this was white Verey lights. Consequently as the 45th and H. L. I. advanced exposed to the fire of 50 Turkish guns they were met by a vastly superior Turkish force also advancing to the assault.

Simultaneously our guns, misled by the Turkish Verey lights, lifted. Thus the infantry, as so often happens in open warfare, were deprived at the most critical moment of fire from the guns. In advancing across the nullahs the tendency was to incline to the left to get an easier crossing place. This resulted in each battalion in succession coming up on the left of the battalion in front. The H. L. I. and 45th were driven back a short distance but the 114th coming up on the left of the 45th, while steadily pressing on in front, used their Lewis guns to fire across the front of the latter and in this way materially helped to break up the counter-attack and enable the right to advance again. The advance of the 114th split the counter-attack in two parts, one of which advanced to close quarters with the 10th Gurkhas. Seeing this the 14th Sikhs attacked the Turks in flank with bullet and bayonet, and the entire counter-attack was driven back. The 112th Infantry advanced steadily and, still inclining to their left, eventually fetched up as daylight was failing close to the angle of the Turkish trenches. The following morning General Leslie took the surrender of the Turkish Commander, 7500 men and 50 guns.

23. This battle illustrates well the advantage of deployment in depth. Successive battalions advancing each in deep formation wore down the Turkish efforts. It also shows that in open warfare infantry will inevitably have to rely on their own fire power, and how that fire power should be employed to help neighbouring units. We also see that the assault eventually got home, not where the G. O. C. had intended, but where the infantry, following the line of least resistance, found that the advance to close quarters was easiest.

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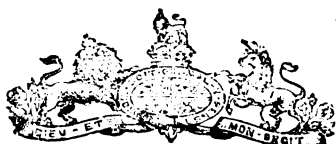
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